

Factors Affecting Nurses' Work Motivation in Kazakhstan

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<p>Abstract</p> <p>Background: Increasing staff motivation is one of the management priorities in any field of activity. Nurses have a direct impact on the quality and safety of care. However, they become vulnerable to stress and reduced motivation, which is a risk of poor performance and termination of work. Despite the fact that motivation has been widely studied among nurses in Western countries, unfortunately, a limited number of studies on this topic have been conducted in Kazakhstan.</p> <p>Aim: The purpose of the study is to reveal the factors affecting the nurses' work motivation of Aktobe Association of secondary medical workers. The objectives were to examine the factors of motivation of nurses on the basis of international experience and to determine the main factors of the nurses' work motivation of Aktobe Association of secondary medical workers.</p> <p>Methods: A quantitative research was conducted using Webropol online survey. The R-MAWS tool was used for data collection. The sample consisted of 323 nurses. The data were analyzed using SPSS 25, using descriptive statistics.</p> <p>Results: The nurses were highly internally motivated (Mean=2.43; SD=0.84). In addition, they showed significant Introjected Regulation (Mean=2.35; SD=0.89) and Identified Regulation (Mean=2.41; SD=0.85). Also, they had moderate External Regulation (on Social: Mean=1.92; SD=0.91 and on Material: Mean=1.68; SD=0.88), and weak Amotivation (Mean=1.37; SD=0.70). Young nurses with less than 10 years of experience were less internally motivated than their older colleagues with more experience ($P \leq 0.05$). In general, the results showed that the younger generation of nurses were less externally and internally motivated than the older generation of nurses ($p \leq 0.10$).</p> <p>Conclusion: The main factors affecting nurses' work motivation were the external and internal factors. It is necessary to increase the motivation of young workers in order to reduce the outflow of medical personnel from the health care sector.</p>		
Keywords/tags nurses, motivation, job satisfaction, self-determination, statistical data analysis, R-MAWS questionnaire		
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1 Introduction

The human factor is important and essential for any organization in the world. Organizations cannot achieve their goals without adequate and effective work. In well-structured organizations, a competitive work area develops, which generates the motivation and commitment of employees to achieve the quality of their services. In healthcare organizations, the human factor is more important because they center around human life. Nurses are one of the most important human resources in medical organizations. (Bahrami, Hasanpour, Rajaeepour, Aghahosseni, & Hodhodineghad 2012.)

The search, development, and retention of nurses are the predominant global challenges in the management of nursing services. Among all health workers, nurses are the largest group of caregivers and interact closely with patients and their families daily. (Toode, Routasalo, Helminen, & Suominen 2015.) In Aiken and other (2012) study on nursing job satisfaction and patient safety in Europe and the United States, it was noted that a significant proportion of nurses in each country experienced a lack of quality of care, were dissatisfied with the work, and reported a high level of burnout that encouraged intentions to leave their jobs. In turn, patients were less satisfied with hospitals that had a higher percentage of unmet nurses. (Aiken, Sermeus, Van den Heede, Sloane, Busse, McKee, Bruyneel, Rafferty, Griffiths, Morena-Casbas, Tishelman, Scott, Brzostek, Kinnunen, Schwendimann, Heinen, Zikos, Stromseng Sjetne, Smith, & Kutney-Lee 2012.) This increases the importance of motivating nurses to keep them in the workplace and requires good management skills in performance management. Most studies of nursing work motivation point to several individual and organizational background factors, which can be useful in studying nursing work motivation. (Toode, Routasalo, & Suominen 2011; Toode et al. 2015.)

Also, studies Meyer, Becker and Vandenberghe (2004) and Altindis (2011) suggest that different aspects of work motivation should also be measured, in order to better understand the behavior of nurses' work. Despite the long-term development of the theory of work motivation, researchers still face difficulties due to the lack of reliable, accurate, and convenient key elements of motivation. Many researchers

(Ryan & Deci 2000; Toode et al. 2011) consider motivation as a phenomenon that changes only in its quantity and are concentrated mainly on the internal work motivation and its reinforcing factors. Although the internal motivation of the work is described as a natural and spontaneous propensity of a person, not everyone has only an internal motivation for any activity. (Ryan & Deci 2000; Meyer, Becker, & Vandenberghe 2004; Altindis 2011; Toode et al. 2011.)

Today, nursing in Kazakhstan is undergoing a phase of reform. In accordance with the "Comprehensive plan for the development of nursing in the Republic of Kazakhstan until 2020" in order to bring the system of nursing in Kazakhstan to the international level, is the introduction of new mechanisms of functioning of medical organizations with equal medical and nursing organizational structures, the introduction of innovative nursing technologies, the development of modern evidence-based nursing practices, and the redistribution and clear delineation of functional responsibilities between doctors and nurses of different levels. There is a release of non-core functions of nurses to care for patients, expanding their duties in the direction of increasing complexity and responsibility of work with the introduction of an adequate system of wages, which should increase the motivation of employees to improve professionalism and personal development, to reduce the outflow of medical personnel from the industry (Comprehensive nursing development plan in the Republic of Kazakhstan until 2020, 2014).

Increasing staff motivation is one of the priority tasks of management in any field of activity. Of particular importance is the solution of this problem in the healthcare sphere in connection with the tasks set in the State Program of the Republic of Kazakhstan "Densaulyk 2016-2019" (The state program of development of health care of the Republic of Kazakhstan "Densaulyk" for 2016-2019, 2016). Nursing is part of a health system that has significant human resources and real potential to meet the needs of the population for quality and affordable health care. Nurses directly affect the quality and safety of medical care. However, they become vulnerable to stress and reduce labor motivation, which is a risk of low working capacity and termination of work. Therefore, the labor motivation of the nurse is one of the important directions of the personnel policy of any medical organization. Despite the fact that labor motivation has been widely studied among nurses in Western

countries, unfortunately a limited number of studies on this topic have been conducted in Kazakhstan.

Therefore, the purpose of this study is based on international experience to reveal factors that affect the motivation of nurses in Kazakhstan, which in turn will help to determine the main factors that will lead to job satisfaction, thereby reducing the turnover of nursing staff. The target group of this research work were nurses who are members of the Aktobe Association of secondary medical workers.

2 Work motivation of nurses

2.1 Factors of motivation

In their study, Bodur and Infal (2015) described motivation by referring to several authors. Grafham, Matheson and Bond (2004) defined motivation as a complex and multidimensional concept, describing motivation “as a psychological process that gives direction to behavior”. Be’gat, Ellefsen and Severinsson (2005) described motivation as “an internal drive that is present to meet unmet needs”, and McLean and Anema (2004) noted motivation as “a will to achieve”. (Grafham, Matheson, & Bond 2004; McLean & Anema 2004; Be’gat, Ellefsen, & Severinsson 2005, according to Bodur & Infal 2015.) There are intrinsic and extrinsic types of motivation. Intrinsic motivation is the internal power that drives an employee to meet personal and organizational goals. The intrinsic motivation of the process is work. It acts as an incentive, employees enjoy what they do, it is recognized independently and doesn't depend on the results. Among nurses, intrinsic motivation is defined as self-satisfaction and pleasure in performing duties, and not working for external rewards. (Hee, Kamaludin, & Ping 2016.) Internal motivation is the achievement of an ideal personality that serves as a motivation for behavior (Bodur & Infal 2015).

In their study, Hee and other (2016) described extrinsic motivation by referring to several researchers. So, Lindner (1998) defined extrinsic motivation as an external force that leads an employee to meet personal and organizational goals. It directs people to perform duties in order to receive remuneration in exchange. In Muogbo

(2013), external factors consist of awards, bonuses, rewards, and benefits. Mankoe (2006) also described it as a good relationship between employees, good working conditions, and a friendly attitude of managers in the workplace. (Lindner 1998; Mankoe 2006; Muogbo 2013, according to Hee et al 2016.) Furthermore, Janssen, De Jonge and Bakker (1999) noted that motivation is an important aspect for the management of personnel in health care institutions (Janssen, De Jonge, & Bakker 1999, according to Bodur & Infal 2015). Bodur and Infal (2015) studied the sources of nursing motivation and related factors. Internal motivation for self-evaluation was recognized as the most important source of motivation for nurses. (Bodur & Infal 2015.)

As organizational pillars, motivational factors of work give positive feelings, which increases the productivity of workers. Also, motivators increase the level of job satisfaction, and help focus on the work itself. (Oladotun & Öztüren 2013.) Salami (2007) suggests there are several variables that affect the success of any organization. These are satisfaction, motivation, organizational commitment, financial reward, promotion, prospects, and leadership styles. (Salami 2007, according to Iranmanesh, Fuladvandi, Ameri, & Bahrampoor 2014.) Factors of motivation were considered by some researchers (Bakay & Huang 2010; Iranmanesh et al. 2014; Weldegebriel, Ejigu, Weldegebreal, & Woldie 2016). Wong, Siu, and Tsang (1999) describe some internal factors, including a sense of participation, interesting work, promotion and evaluation of a work well done. Also, Curtis, Upchurch, and Severt (2009) noted some external factors, including work safety, good wages, and good working conditions. (Wong, Siu, & Tsang 1999; Curtis, Upchurch, & Severt 2009, according to Iranmanesh et al. 2014.) Personal qualities, such as age, gender, marital status, level of education, etc., are personal factors that influence the variability of the internal factors of nurses' motivation (Weldegebriel, Ejigu, Weldegebreal, & Woldie 2016).

In their literature review, researchers from Saudi Arabia (Baljoon, Banjar, & Banahar 2018) studied the influence of organizational and personal factors associated with the motivation of the work of nurses of some medical organizations at the international level. In their review, they refer to Gagné and Deci (2005) who noted that less attention has been paid to the fact that the quality of service of a highly

motivated employee can still vary depending on extrinsic or intrinsic motivation. In addition, it was emphasized that there are various health care systems, so the level of motivation of nurses and the factors affecting it are diverse in organizations. (Gagné & Deci 2005, according to Baljoon, Banjar, & Banahar 2018.)

Despite the long-term development of the theory of work motivation, researchers in this field have so far faced difficulties due to the lack of accurate and reliable key elements (Ryan 2011). Most researchers have mainly focused on internal motivation and its factors. However, not many people have only internal motivation for any particular action, which is especially noticeable in the working environment. (Ryan & Deci 2000; Toode et al. 2011, according to Toode et al. 2015.) Therefore, this study is based on the theory of self-determination, which includes external and internal motivation. Ryan and Deci (2000) noted that theory examines intrinsic motivation and the different kinds of extrinsic motivation that are present in the continuum of regulatory styles (amotivation, external regulation, introjected regulation, identified regulation). Amotivation is a complete lack of motivation to work. External regulation defines actions aimed at satisfaction of external demand or obtain an external reward. Introjected regulation includes actions triggered to avoid guilt, anxiety or pressure, or to gain reputation and pride. Identified regulation refers to actions related to personal values and personal property. Thus, work motivation depends on the cause of the behavior, which can be external and controlled from the outside, autonomous or completely internal. (Ryan & Deci 2000, according to Toode et al. 2015.)

2.2 Job satisfaction

According to Akansel, Özkaya, Ercan, and Alper (2011), McCloskey and McCain (1987) defined job satisfaction as the workers' degree of enjoyment of work. If people are stimulated, they will be more satisfied with their work. (McCloskey & McCain 1987, according to Akansel, Özkaya, Ercan, & Alper 2011.) Ergin (1997) described job satisfaction as also being closely related to the satisfaction of life, and these two concepts have an impact on the physical and mental health of people (Ergin 1997, according to Akansel et al. 2011). In his two-factor theory, Herzberg (1959, according to Akansel et al. 2011) argues that there are certain factors in the workplace that

cause job satisfaction, while a separate set of factors cause dissatisfaction. Dissatisfaction with work is caused by factors such as poor control, poor working conditions, unpleasant colleagues, low wages, poor management, and low labor safety. (Herzberg, Mausner, & Snyderman 1959, according to Akansel et al. 2011.) Herzberg et al. (1959) presented such factors as achievement, recognition, responsibility, career growth, and the nature of the work. He classifies these factors as motivators, and argues that they are factors that will improve job satisfaction. Satisfaction with work is a factor that occupies an important place in a person's life. Satisfaction from work and harmony in the workplace are needed to make employees happy. Employee satisfaction affects the quality of medical assistance. Motivators such as recognition and achievements in work make the work process more productive and creative. (Herzberg et al. 1959, according to Akansel et al. 2011.)

Dissatisfaction with work often prevails in relation to satisfaction in various health care institutions, whether public or private. This dissatisfaction leads to low productivity, i.e. to low quality of medical services. In order to prevent this from happening we need to understand the concept of motivation and satisfaction. Motivation is formed from the individual needs of the employee, and satisfaction comes from the completion of a certain process. (Faris, Douglas, Maples, Berg, & Thrailkill 2010.)

According to Klein (2005), Tang (2003) defined the satisfaction of medical workers as a complex variable that affects the recruitment and retention of staff in all sectors of health. To be more precise, job satisfaction affects the quality of life of an employee, which ultimately can affect the care and treatment of patients. Factors that affect nursing job satisfaction may be different because their functions, service areas, levels of responsibility, accountability, and educational preparation are different. (Tang 2003; Klein 2005, according to Faris et al. 2010.) Therefore, it is important to identify various factors that can improve the level of job satisfaction, thereby improving the status of the nurse, retaining staff, and maximizing the quality of care. (Faris et al. 2010.)

In recent years, practicing nurses have become one of the most valuable health care workers (Laurant, Hermens, Braspenning, Sibbald, & Grol 2004, according to De Milt, Fitzpatrick, & McNulty 2011). They have demonstrated the ability to provide high quality, cost-effective health care with attendant high patient satisfaction (Shum, Humphreys, Wheeler, Cochrane, Skoda, & Clement 2000; Wortans, Happell, & Johnstone 2006, according to De Milt et al. 2011). The urgency of this problem is due to the fact that the motivation of staff is a key area of personnel policy of any organization (WHO 2005, according to Papathanasiou, Fradelos, Kleisariis, Tsaras, Kalota, & Kourkouta 2014), and in the health care system nursing staff is the most important part of the workforce, which has a moral duty to provide professional care for their patients (Papathanasiou et al. 2014). The shortage of nurses is closely related to decreased job satisfaction and poor quality of care (Leiter, Harvie, & Frizzell 1998; Aiken, Clarke, Sloane, Sochalski, & Silber 2002, according to Papathanasiou et al. 2014). In this regard, it becomes important to study the factors that affect the increase of labor motivation of nurses, which in turn will lead to job satisfaction, thereby reducing the turnover of nursing staff.

2.3 Challenges of nursing staff turnover

There are some peculiarities in nursing, as it is a predominantly female profession. Along with the overload of work in the workplace, there are domestic chores and the upbringing of their children, which leads to the accumulation of functions. (Spindola & Santos 2005, according to Somense & Duran 2014.) Marziale (2001) noted in connection with the characteristics of the work of nurses, dissatisfaction among them begins with the working environment because the very nature of the medical institution and the activities performed in this environment are often harmful to health (Marziale 2001, according to Somense & Duran 2014). Somense and Duran (2014) summed up factors causing discontent among nurses. Low wages, the lack of social recognition and conflict relations can cause dissatisfaction, which in turn can have a negative impact on the professional and personal life as well as the quality of medical care (Bergamini & Coda 1997; Marziale 2001; Chiavenato 2008; Melo, Barbosa, & Souza 2011, according to Somense & Duran 2014).

Smith (1997) noted that workers who are satisfied with their work are more productive and eager to work, while dissatisfied employees have absenteeism, displeasure and therefore, a large turnover among them (Smith 1997, according to Gupta, Reddy, Prabha, & Chandna 2014). Satisfaction with work is the main element for retaining workers in any organization (Gupta et al. 2014). Unsatisfied workers have a high intention to leave work, which leads to a high staff turnover and negatively affects the person, thereby leading to a professional burnout (Mrayyan 2005; Lambert, Hogan, & Alzheimer 2010, according to Gupta et al. 2014). One of the main consequences of making their work satisfying for nurses is the quality of medical care, which directly affects the quality of working life, and the quality of care for patients (Gupta et al. 2014). Many medical institutions face the problem of the turnover of nursing personnel, which is one of the main problems affecting medical organizations' productivity and profitability. (Alexander, Bloom, & Nuchols 1994, according to Gupta et al. 2014.) Therefore, it is necessary that the needs of nurses be taken into account and a favorable atmosphere is created for them to work with the maximum satisfaction resulting in high-quality nursing care (Lakshmi & Ramachandran 2012).

There is a shortage of nurses on all continents (Saifuddin, Hongkraitert, & Sermsri 2008, according to Sriratanapapat & Songwathana 2011), and this is due to two main factors: high staff turnover and a decrease in the proportion of nurses who remain in the profession (Srisuphan, Senaratana, Kunaviktikul, & Tonmukayakul 1996, according to Sriratanapapat & Songwathana 2011). The nurses who remain in the profession have increasing workloads. The main factors that affect dismissal are: health problems, stress in the workplace, and dissatisfaction with work. (Hasselhorn, Tackenberg, & Muller 2003, according to Sriratanapapat & Songwathana 2011.) Admissions of medical institutions face the problem of improving the working environment in order to improve job satisfaction for nurses, as well as their retention in the workplace. (Sriratanapapat & Songwathana 2011.)

Wieck, Dols, and Northam (2009) described that nurses who are satisfied with their work are more productive, so there is more chance that they will remain at work (Wieck, Dols, & Northam 2009, according to Tellez 2012). Tellez (2012) refers to O'Brien-Pallas and Duffield (2004) and Shamash (2002) noting the management of

medical institutions uses various incentives to retain experienced staff. Encouraging nurses improves staff morale. The study by Telles (2012) showed that nurses are more satisfied with their work if they have a balanced and financially secure life, a family, children, a home, higher hourly wages, and income from other sources. (Tellez 2012.)

2.4 Research in the field of nurses' work motivation

Internal motivation is associated with interest in activities, with the importance of the work performed, with the freedom of action, the opportunity to realize oneself, and develop one's skills and abilities (Wong, Siu, & Tsang 1999, according to Iranmanesh et al. 2014). Internal motivation helps nurses improve their emotional and physical well-being; increase their satisfaction, thereby improving the quality of medical care (Iranmanesh et al. 2014). Thus, in order to increase staff satisfaction, the organization must encourage its staff to increase organizational commitment and reduce the intention to leave (Kim, Leong, & Lee 2005).

The results of the Iranian researchers (Iranmanesh et al. 2014) showed that external motivational factors are more important in creating work motivation among nursing respondents in comparison with internal factors. The study revealed that in the Iranian health care system, nurses have almost the lowest level of wages. Because of such frustrations, an external motive, like wages, is an important factor for work motivation. (Iranmanesh et al. 2014.)

The performance of a nurse depends on whether the causes of the behavior are external and controlled by someone else, autonomous, or completely internal (Ryan & Deci 2000; Gagné et al. 2010; Toode et al. 2015). The more staff is regulated from the outside, the less they show interest (Toode et al. 2015), are more inclined to negative consequences (Ryan & Deci 2000), and thereby, can experience psychological distress (Gagné et al. 2010). More autonomous external and self-determined internal motives positively affect job satisfaction, affective commitment, well-being, and self-esteem of health (Ryan & Deci 2000; Gagné et al. 2010). Alongside this, external motivation should be considered as important as internal motivation in the study of the working behavior of nurses. Since most people work to

make a living, their work is always instrumental. In the study of work motivation with Estonian nurses, 201 respondents working in different clinics in Estonia took part. When studying the labor motivation of Estonian nurses, it was revealed that nurses were moderately externally motivated and internally strongly motivated. Age and length of service of nurses positively correlate with introjected regulation. (Toode et al. 2015.)

Akansel and others (2011) identified the level of staff satisfaction of one of the medical centers in Bursa, 65 nurses and 15 doctors taking part. When comparing the levels of satisfaction of the work of nurses and doctors, a significant difference was found only in the motivation to work. The motivation of nurses was significantly higher compared with doctors. On the other hand, the comparison of motivation between men and women did not show any significant differences. The study found that the level of nursing education does not affect job satisfaction. Nurses were more satisfied with career opportunities compared to female doctors. However, it was found that low wages are a factor that causes discontent in the work of nurses and doctors. (Akansel et al. 2011.)

A study conducted by Faris and others (2010) described the level of job satisfaction and barriers in the practice of advanced nurses (APN) used in the administration of public health veterans (USA). An online survey of 1,983 respondents was conducted. Of this sample, 1,577 (79.7%) were practicing nurses, 353 (17.8%) were nurse-clinical specialists, and 48 (2.4%) had a dual role. Of the respondents, 91.1% were women and 8.9% men. Overall, the study showed that nurses of advanced practice are minimally satisfied with their work. They were most satisfied with their autonomy and were least satisfied with the opportunities for professional growth and the level of partnership and collegiality in practice. (Faris et al. 2010.)

In a study by De Milt and others (2011) on the difference in job satisfaction and intention to leave the current position of the nursing profession, the results were comparable to those in the literature on APNs oncology, Ontario (Bryant-Lukosius, Green, Fitch, Macartney, Robb-Blenderman, McFarlane, Bosompra, Dicenzo, Matthews, & Milne 2007). The study by De Milt and others (2011) involved 254 nurse practitioners. Of the respondents, 27% stated their intention to leave the current position, 5.5% the intention to leave the nursing profession. There are significant

differences between job satisfaction based on the intention to leave current positions and the intention not to leave the current position based on higher job satisfaction. De Milt and others (2011) refer to Bryant-Lukosius and others (2007) stating that the satisfying factors associated with workplace preservation included their primary responsibility for care and evaluation by patients and their families. In addition, studies have shown a direct link between employee satisfaction and patient satisfaction (Misener, Haddock, Gleaton, & Abu Ajamieh 1996, according to De Milt et al. 2011).

In a study conducted by Indian researchers, the level of job satisfaction among nurses in public and private clinics in Andhra Pradesh was compared. It was revealed that the level of job satisfaction is greater for public nurses than for private nurses. Compared with nurses from private hospitals, nurses of public hospitals were significantly satisfied with wages and various incentives. (Gupta et al. 2014.) Also, the study by Tellez (2012) showed that nurses who have a balanced and financially secure life, a family, children, a home, a higher hourly wage, and a higher income from other sources are more satisfied with their work (Tellez 2012). Thus, the above studies have shown that external motivating factors are a priority, and internal satisfaction with work also plays an important role.

2.5 Nurses' work motivation of primary health care

Nursing motivation is important in the context of primary health care, since low motivation among primary care nurses (PHC) can adversely affect the achievement of high standards in the provision of health services (Wilson, Squires, Widger, Cranley, & Tourangeau 2008; Newton, Kelly, Kremser, Jolly, & Billett 2009, according to Jooste & Hamani 2016). In this regard, a study was conducted in the framework of the theoretical basis of McClelland's theory of acquired motivation, which consists of three basic needs: the need for achievement, the need for power, and the need for accession. The results showed that PHC nurses need confirmation, organizational responsibility, strategic planning and promotion, and support. (Jooste & Hamani 2016.)

According to Kelly (2013) motivation is a process that influences and directs behavior to satisfy the need. This is an important part of leadership because people need to understand each other to effectively behave. (Kelly 2013, according to Jooste & Hamani 2016.) Besides, effective managers use their capabilities to maintain a healthy balance between their own power and the work of employees (Du Toit, Erasmus, & Strydom 2010, according to Jooste & Hamani 2016). McClelland (2010) argued that a particular motivational model, which he called leadership motivation, is necessary for people to be effective managers. This model is characterized by a high need for power, socialized to achieve the goals and low need for belonging. (McClelland 2010, according to Jooste & Hamani 2016.) Nurse managers who recognize and use their power are more likely to achieve personal and professional goals, helping nurses to perform their primary health care, nursing, and education tasks (Coetzee & Schreuder 2012, according to Jooste & Hamani 2016).

Leadership and power are closely related to concepts, and for a better understanding of effective leadership it was necessary to study the need for power. Jooste and Hamani (2016) refer to a study conducted by McClelland (2010) which showed that PHC nurses were demotivated. During the effectiveness evaluation sessions, nurses of PHC indicated that they needed power because they did not have the opportunity to be in charge of the clinic, to preside over meetings, and to participate in the decision-making process, promotion or promotion in professional development. This can lead to the fact that they feel unmotivated to provide quality medical care. (McClelland 2010, according to Jooste & Hamani 2016.) Furthermore, the motivation of medical workers does not depend only on their leaders. Health care workers from rural areas or with experience in rural areas are likely to be motivated to go there and work there. (World Health Organization 2010.)

The motivation of the provider of primary health care is defined as a defining characteristic of the health sector. Therefore, ensuring this is very important for the effective provision of health services in several developing countries. (Peters, Chakraborty, Mahapatra, & Steinhardt 2010.) Several scientific studies have found that motivated medical personnel are more likely to apply their knowledge and skills to a real healthcare institution, and has also pointed out that effective use of the skills of a well-motivated health workforce contributes to a large and effective health

care service (Prytherch, Kagon, Aninanya, Williams, Kakoko, Leshabari, Yé, Marx, & Sauerborn 2013; Ojaka, Olango & Jarvis 2014; Daneshkohan, Zarei, Mansouri, Maajani, Ghasemi, & Rezaeian 2015, according to Haso et al. 2018). Motivation of health workers can affect the creation of provisions for health services. However, in developing countries and middle-income countries, low staff motivation and a lack of human resources for health are factors that lead to the abolition of health systems and health services. (Weldegebriel, Ejigu, Weldegebreal, & Woldie 2016.) It is argued that the motivation and satisfaction of primary health care were affected by several factors. These factors include good governance, supervisory bodies and managerial support and good working relationships with colleagues, financial aspects, career development, continuing education, and the infrastructure of medical institutions. (Daneshkohan, Zarei, Mansouri, Maajani, Ghasemi, & Rezaeian 2015.)

A study was conducted to study the factors affecting the motivation of PHC workers in medical centers in the western zone of Arsi. A total of 307 primary health care workers were selected from health centers located in seven areas of the western Arsi area, using a simple random sample. The results of this study showed that the proportion of demotivated primary care workers in the study was high 41.7%. (Haso et al. 2018.)

The World Health Organization (WHO) (2010) identified a highly effective health workforce as the key to achieving better health. Nevertheless, motivation and retention of medical personnel is an important issue (Willis-Schattuck, Bidwell, Thomas, Wyness, Blaauw, & Ditlopo 2008). A study was conducted to examine factors affecting the motivation and retention of health workers in primary health care facilities at three different locations in Kenya. There were 404 respondents taking part in the survey. Most of the health workers were nurses (28.7%). Based on the results of the study, the need to address problems associated with employee satisfaction and working conditions was identified. (Ojaka, Olango, & Jarvis 2014.)

The Code of the Republic of Kazakhstan "On the health of the people and the health care system" defines PHC: "Primary health care – pre-medical or qualified medical care without round-the-clock medical supervision, including a set of available

medical services provided at the level of a person, family and society" (Codex Republic of Kazakhstan in 2016). Moreover, after the WHO International Conference on Primary Health Care in Almaty on September 12, 1978, the development of PHC has become one of the most important ways to develop health systems in all countries and primary health care has been identified as the "first contact zone" of the population with health services and as the first stage of health care of the population. It is now generally accepted that a strong primary care system gives the best health indicators of the population at lower costs and higher public satisfaction with medical care. Many of the health problems can be solved when creating a sustainable PHC system. Therefore, throughout the world, the process of improving and strengthening this service continues, the main direction of which is to focus on the needs of the population as a whole and of each family separately. (The concept of modernization of primary health care of the Republic of Kazakhstan until 2030 2014.)

An analysis of international experience shows that with a common similarity in the organization of primary healthcare services to the population, each country decides through PHC specific problems of protecting public health, depending on the demographic, geographic, climatic, and cultural characteristics of the region. The primary focus of PHC is not the patient during an illness, but the family with its social, domestic, psychological, and economic problems. Therefore, the work of primary care specialists is aimed at preventing the occurrence of diseases by studying the possibility of their occurrence in each served family. (The concept of modernization of primary health care of the Republic of Kazakhstan until 2030 2014.)

PHC specialists are meant to protect consumers of medical services from diseases and help them to navigate in medical knowledge and medical institutions. They provide a full range of medical services from disease prevention to treatment and rehabilitation. In many countries, primary health care workers do not seem to appreciate the importance of their roles. Therefore, would be necessary having given them the technology, also to increase their motivation to compensate for their hard work. (Sharman 2014.)

In Kazakhstan, the health care system strives to adhere to the Almaty Declaration of primary health care (Devi 2014). In her article, Devi interviewed a healthcare

specialist who presented that in the healthcare system of Kazakhstan, the system of specialization is still dominant. Building trust in a system in which a primary health care specialist observes the patient's health is a problem. Disease management is another area that needs to be changed. Because patients, even without complications, go to a narrow specialist, and not to a primary health care worker. (Devi 2014.)

One of the main directions of health care reform implemented to implement constitutional guarantees to the population in the field of health care, is the reform of primary health care. The efficiency and quality of the entire health care system, the preservation of the country's labor potential, as well as the solution of the majority of medical and social problems that have arisen at the family level, largely depend on the state of outpatient and polyclinic care. (Seidakova, Sabirova, Kalandarova, & Begalieva 2015.)

The goal of ensuring the quality of medical services is to achieve the best possible conditions for people to whom this service is provided. The quality of nursing care depends on the degree of development of nursing in the country and a single medical institution, the requirements for the nurse who are assigned to her and the role of senior and senior nurses in this. The object of the nurse's activity is a patient, a person as a set of physiological, psychosocial, and spiritual needs, the satisfaction of which contributes to the health of the nation to growth, development, and its fusion with the environment. The nurse has to work with different categories of patients. And for each patient, the nurse must create an atmosphere of respect for his true judgment, life attitudes, customs and beliefs, especially those relating to his health, the health of his associates. The environment is seen as the most important factor affecting the life and health of a person. Every nurse must understand that a person includes the totality of the social, psychological, and spiritual conditions in which his life activity takes place, and this special place is occupied by the chief and senior nurses. (Seidakova et al. 2015.)

In most cases, nurses, without even noticing themselves, limit themselves to previously acquired knowledge, do not engage in their own development, tempted by a deceptive calm, stability, and security. This makes their work monotonous, boring, and hopeless, which can cause fatigue, especially in the primary health care

sector. To fully utilize the potential of an average paramedic, it is necessary to create conditions for them to work on their own site to monitor their activities and systematically raise their educational level. The first need is to educate the nurses of an emotional attitude to themselves, their profession, and hence to their patients. This is influenced by three factors: social (the status of the profession, the importance in society); personal (associated with the direction of the individual – the attitude towards people, business, the internal component of the motivation of achievement, etc.); the factor of the environment (place of work). Of great importance are the relationships with colleagues in the team, an active joint solution of professional problems. The collective (often including the administration) can reduce the motivation of the activity by its general negative or indifferent attitude towards the nurse. In addition, working conditions may not contribute to the successful implementation of professional tasks: patient overload, lack of necessary medications, low overall material and technical base of PHC facilities, lack of adequate rest for employees of these institutions and other factors of everyday life. The mismatch of these three factors – social, personal, and environmental – or one of them can cause a person to be dissatisfied with the work and its results, frustration, a sense of helplessness, which will immediately affect the efficiency and productivity of his work, i.e., the quality of the medical care provided. (Seidakova et al. 2015.)

3 Purpose, Objectives, and Research Questions

The purpose of this study is to reveal the factors that influence the motivation of nurses of Aktobe Association of secondary medical workers in order to determine the main factors that will help to lead to job satisfaction and reduce the turnover of nursing staff. The objectives of the research are to examine the factors of motivation of nurses on the basis of international experience. And also, to identify the main factors of nurses' work motivation of Aktobe Association of secondary medical workers.

Research Questions:

1. What factors influence nurses' work motivation?
2. What are the main factors of work motivation of nurses?

4 Methodology

4.1 Quantitative research

Quantitative research is a structured way of collecting and analyzing data obtained from different sources. In quantitative research, methods of collecting evidence that can be converted into numerical data and based on a positivistic position are used. Usually the number data can be statistically processed to confirm or disprove the original hypotheses or investigate the issue. The results can then be used to predict or indicate trends. The reinforcement of quantitative research is the principle that the world is stable and predictable. The ultimate goal is to ensure that the researcher is confident that any results are valid and reliable. The accuracy of the tools used to measure what is under investigation and their ability to reproduce the results is a fundamental ability to conduct quantitative research. Another feature of quantitative research is that it seeks objectivity. (Topping 2015.)

In the quantitative method of research, a large number of respondents are covered in order to obtain representative data (Salway & Ellison 2015). Therefore, a quantitative research method was chosen to study the factors influencing the work motivation of nursing. The quantitative method will allow to solve the research tasks and to reach the set research goal. The researcher is fully confident that the method chosen by him will give reliable, new results. Due to the fact that the quantitative research method is based on numbers, this can make it very accurate, which is important when conducting a study in the field of nursing work motivation.

4.2 Choosing the data collection instrument

The questionnaire is a method for collecting standardized information that is convenient for both the participant and the researcher. Questionnaires allow to

collect data in an orderly form and draw conclusions on broad strata of the population that correspond to the sample. (Salway & Ellison 2015.) According to Polit and Beck (2008), questionnaires allow you to collect self-report data that is difficult to collect in any other way (Polit & Beck 2008, 51). The main advantages of questionnaires are that they give a quick and complete idea, inexpensive to use, can cover a large number of participants, despite the fact that their large number is easy to analyze. Standardized questionnaires allow data to be collected at different levels of specificity. The questionnaire allows you to get well-structured and comparable results, and the respondents' anonymity increases the objectivity and sincerity of the answers received. (Salway & Ellison 2015.)

Therefore, the questionnaire was chosen as a method of collecting information on the study of nursing work motivation. To determine the right tool that will answer the research question, various tools used in studying the motivation of nursing labor were analyzed. The analysis and comparison of questionnaires was justified on the main concepts used in the theoretical part of the articles studied in the field of work motivation of nurses.

A literature search was conducted using the CINAHL database to determine the appropriate tool to answer the research question. Various questionnaires used in the study of the motivation of nursing work worldwide from 2010 to 2017 were analyzed:

- A questionnaire based on the theories of Maslow and Herzberg, which consists of 19 subjects grouped into four different motivational factors: attributes of work, awards, employees, and achievements (Lambrou, Kontodimopoulos, & Niakas 2010).
- A questionnaire that evaluates the job satisfaction scale, consisting of seven factors: management and managers in organizations; patient examination, treatment and care; personal and interpersonal relationships; career opportunities; organizational participation; incentives; and payment (Akansel et al. 2011).
- A questionnaire on a scale of job satisfaction Meissner (MNPJSS) (Faris et al. 2010; De Milt et al. 2011).
- The Anticipated turnover scale (ATS) (De Milt et al. 2011).

- The NWI-R questionnaire, which includes questions related to job satisfaction, perceptions of patient care practices and quality of care, and intentions to leave your current job (Cummings, Olson, Raymond-Seniuk, Lo, Masaoud, Bakker, Fitch, Green, Butler, & Conlon 2013).
- The organizational commitment scale (OCS) of Meyer and Allen (Altindis 2011; Iranmanesh et al. 2014).
- A questionnaire based on the theory of Herzberg, which consists of four sections: motivation factors, hygiene factors, job satisfaction, and demographic data (Oladotun & Öztüren 2013).
- The Motivation at Work Scale questionnaire (MAWS) (Toode 2015; Galletta, Portoghese, Pili, Piazza, & Campagna 2016)

As a result of the analysis of the tools, the questionnaire chosen was the Motivation at Work Scale (MAWS), based on the theory of self-determination, since it fully answers the research question (Appendix 2).

4.3 Revised Motivation at Work Scale (R-MAWS) questionnaire

MAWS was developed by Gagné, Forest, Gilbert, Aubé, Morin, and Malorni (2010) in accordance with a versatile understanding of motivation, based on the theory of self-determination. This questionnaire combines four types: internal motivation, identified regulation, introjected regulation, and external regulation. The MAWS subsections are related to the constructions of organizational behavior. (Gagné et al. 2010.) Also, the study by Gagné et al. (2010) described the creation of the questionnaire motivation at work (MAWS) in two languages (English and French), its structure was evaluated using confirmatory factor analysis with invariance tests and the relationship between the form and its precursors and outcomes associated with organizational behavior. Elements have also been created to measure different work-related behavioral norms, which represent a continuity of work motivation. Attention was focused on the specific types of motivation that are most useful for performance evaluation. These are external regulation, introjection, identification, and internal motivation.(Gagné et al. 2010.)

During a detailed study of the MAWS tool, it was found that there was a revised version of MAWS, which is based on the theory of self-determination and includes subscales for amotivation, external regulation, introjected regulation, which were defined by regulation and internal motivation. This is an improved version of MAWS, which fixes problems with the validity and reliability of the subscale. The results of the study showed evidence of reliability and structural invariance of scale in ten different languages (French, English, Spanish, Italian, Dutch, Norwegian, Greek, German, Chinese, and Indonesian). R-MAWS (Revised Motivation at Work Scale) has been tested in 12 countries of the world, at various workplaces and organizations. This heterogeneity has given confidence that the principles of the theory of self-determination are universal. (Gagné, Forest, Vansteenkiste, Crevier-Braud, Van den Broeck, Aspeli, Battistelli, Bellerose, Benabou, Chemolli, Güntert, Halvari, Johnson, Indiyastuti, Ndao, Martin-Albo, Molstad, Naudin, Ntalianis, Nuñez, Olafsen, Panagopoulou, Portoghese, Roussel, Westbye, & Wang2012.) Therefore, for this study, the R-MAWS tool was chosen, taking into account its strengths.

In this scale, participants were asked to evaluate the reasons for attracting within the framework of one (not for this reason) to seven (for this reason). The scale measures five forms of motivation and contains 19 items (see figure 1) including three items for extrinsic regulation (social), three for extrinsic regulation (material), four for introjected regulation, three for identified regulation, three for intrinsic motivation, and three for amotivation. (Gagné, Forest, Vansteenkiste, Crevier-Braud, van den Broeck, Aspeli, Bellerose, Benabou, Chemolli, Guntert, Halvari, Indiyastuti, Johnson, Molstad, Naudin, Ndao, Olafsen, Roussel, Wang, & Westbye 2015.)

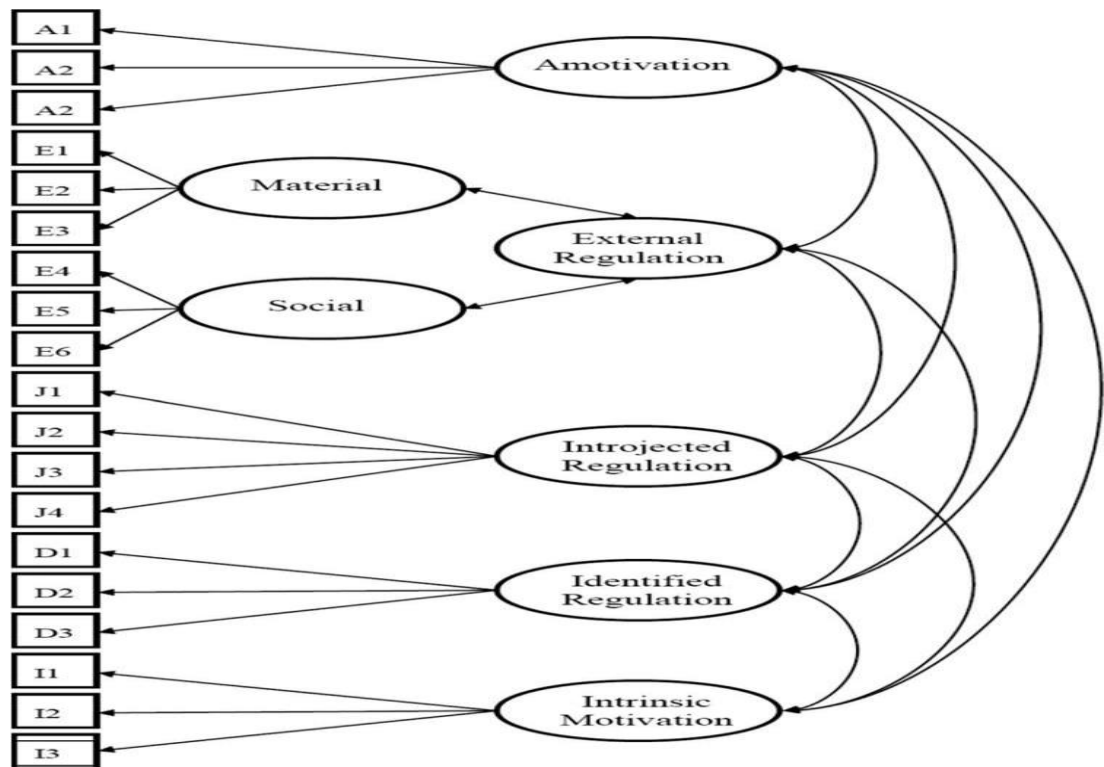


Figure 1. The multidimensional work motivation scale (Gagné et al. 2015)

Permission to use the R-MAWS was obtained from the questionnaire developer Marylène Gagné was obtained on May 2018 for research purposes. The questionnaire passed the process of translation and adaptation, i.e. the conceptual equivalence of translation in Kazakhstan was checked to ensure that the instrument is equally natural and acceptable to function in a similar manner. Also, the focus was on intercultural and conceptual equivalence. Direct and reverse translation was used for this purpose. Translation from the original version into the Kazakh and Russian languages was carried out by a medical worker who was familiar with the terminology of the region and is well aware of the English culture. Further, the reverse translation was done by an independent translator who was not familiar with the questionnaire. (WHO 2019). In general, the questionnaires were checked and compared with due regard adequate cross-national equivalence (Steenkamp & Baumgartner 1998). The final translation was compared with the original questionnaire to verify the correctness of the translation (Gagné et al. 2012).

In addition, the questionnaire included background questions, including: 1) gender; 2) age; 3) marital status; 4) the status of education; 5) work experience; 6) type of

activity; 7) administrative duties; 8) the employment sector; 9) presence of intent to quit work; and 10) the desire to change the profession.

4.4 Approval of ethical issues

This study was approved by the local ethics Committee of KazMUCE. The study took into account ethical considerations such as respect for participants, voluntary consent of participants, and confidentiality. Respect for participants is a key research principle (Johnson & Long 2015). This involves recognizing that everyone has value in itself and that this value should inform all interactions between people. Such respect includes recognizing the value of human autonomy – the ability to determine one's own life and decisions (National statement on ethical conduct in human research 2007). Therefore, during the research, respect was shown to the participants' decisions. All participants in the study were provided with adequate information on the progress of the study. The key aspects of participation for potential recruits of participants were clearly explained. (Johnson & Long 2015.) Also, prior to the survey, respondents were introduced to the voluntary informed consent, agreeing they were interviewed. Obtaining consent was included to provide clear information to the respondents so that they can make an autonomous decision. Confidentiality was preserved concerning participants and their data, which included personal, biographical, and demographic information. (Johnson & Long 2015.)

The researcher acquired permission from the questionnaire developer to use the R-MAWS methodology (Appendix 3) in the research and translate it to Russian and Kazakh. After that, the researcher asked permission (Appendix 4) from associations to receive the register of the association. After that, the researcher contacted the nurses. All participants in the study gave their consent to conduct the survey (Appendix 5). Participation in the survey was voluntary. The questionnaire was anonymous, so the results of the questionnaire did not affect their work. Nurses could answer the questionnaire during the working day, in their free time from work, i.e., so that time for answering was not limited. Moreover, the existing guidelines for the preservation of legislation in the field of research and data protection will be respected. In addition, upon completion of the survey, the collected data will be

stored in a safe place, and measures will be taken to ensure the safe disposal of data (Johnson & Long 2015).

5 Data collection and analysis

5.1 Participants and data collection

Data was collected using the Webropol online survey software in November and December 2018. The R-MAWS questionnaire in English was downloaded to Webropol and a public link was made to two languages (Russian and Kazakh). The survey was conducted among members of the Aktobe Association of secondary medical workers. The Aktobe Association of secondary medical workers was established with the aim of improving, increasing the efficiency and effectiveness of the functioning of the nursing service of Aktobe region. The Association's mission is to increase the prestige of the nurse profession. There are 1,830 nurses in this Association. Of these, 974 nurses work in the primary health care system, the rest work in other areas of health care. The survey was conducted with the participation of nurses who are members of the Aktobe Association of secondary medical workers. The inclusion criteria were nurses with work experience for over one year. The exclusion criteria were nurses without work experience, nurses on maternity leave, and retired nurses.

The sample size was calculated using an online calculator that calculates the number of participants with a confidence interval of $95\pm 5\%$. This was necessary to ensure that the sample size was sufficient to produce meaningful results (Polit & Beck, 2008). The required sample size was 318.

For the selection of participants there was to be a probable sample, or rather a simple random sample (Johnson & Long 2015). A request was made to the Aktobe Association of secondary medical workers to provide the contact information of nurses. The chairman of the association provided contact details of 350 nurses (mobile phone numbers and e-mail). All respondents were individually sent links to questionnaires in two languages (Kazakh and Russian). Finally, 323 respondents completed the survey.

5.2 Analyses methods

In this study, the factors of work motivation of nurses in the Aktobe Association of secondary medical workers were analyzed with the help of R-MAWS. Answers for Likert were united in three groups: one - not at all/very little/a little; two – moderately; three - strongly/very strongly/ completely. Also, all statistical analyses were carried out with use of the software of SPSS of version 25. Collected data were critically checked for completeness, then coded and exported to SPSS 25. Coding is a process of data translation to the characters compatible to the computer analysis (Polit & Beck 2008, 33). Further, from the Webropol online survey program, there was export of data to SPSS 25. The corresponding types and scales were selected for each variable.

Data were analyzed with the use of descriptive statistics. For the description of categorial data, frequencies and percent were used, and for the description of continuous data, mean values and standard deviations were taken. In addition, for the purpose of definition of answers of respondents of different age groups and different experience on variable questionnaires of R-MAWS, tables of interface were created. In this research, statistically significant indicators of Chi Square, P- value, and degrees of freedom (df) are described. All results with P-values below and equals 0.05 were considered statistically significant as well as important for practice. (Walters & Freeman 2015, 499-500; Freeman & Walters 2015, 507.)

6 Validity and Reliability

Along with the results, the study should also take into account the rigor of the study. Rigor refers to the extent to which researchers are working to improve the quality of research. In a quantitative study, this is achieved by measuring validity and reliability (Heale & Twycross 2015, 66).

The translation was carried out according to the instruction by WHO "Process of translation and adaptation of instruments" (WHO 2019). Following the translation of the questionnaire into Russian and Kazakh, the content of the actions was carefully

studied, i.e. whether the instrument adequately covered the entire area related to the variable. The study of factors influencing motivation covers the entire content of the process with a great emphasis on internal and external motivating factors.

The use of the R-MAWS tool made it possible to objectively obtain relatively accurate information about the work motivation of nurses and the factors affecting this in Kazakhstan. All statistical data are presented in the results of the study. To assess the sample size requirement of the study, a force analysis was conducted to ensure that the sample size was sufficient to produce meaningful results (Polit & Beck 2008, 345). The sample size was calculated at 95% confidence. The sample was representative, i.e. contained similar share of variables as in the General population of nurses of the Aktobe Association of secondary medical workers (Hunt & Lathlean 2015, 180). A sufficient sample size and a good response rate provide a direct opportunity to communicate these results to a wider audience for further empirical research. Thus, the results can be generalized for all medical institutions of Kazakhstan. Also, this study serves to increase the evidence base from which it is possible to understand the work motivation of nurses in Kazakhstan, and provides comprehensive information on what factors deserve support, further study, and development of effective motivational strategies for nursing staff. Despite the active distribution of the questionnaire through the mobile application WhatsApp, only a small number of respondents of the Aktobe Association of secondary medical workers responded the first time. Many had to explain and send the questionnaire again several times. It is worth noting that most nurses did not have e-mail, so it was decided to send a questionnaire link via WhatsApp. In addition, the Kazakh nurses, as a rule, are not accustomed to participating in research which requires them to express their individual opinion and to fill in electronic questionnaires.

The validity and reliability of the tools used in the study serve to strengthen the results. To minimize possible measurement errors, there are a number of strategies aimed at using an effective tool. (Polit & Beck 2008, 458.) The effectiveness of the questionnaire was determined by the introduction of a tool that had previously been psychometrically tested. The reliability of the content was established through a comprehensive literature review and conceptual analysis of work motivation. The R-MAWS tool had evidence to support its validity for use in different situations and for

different samples. In addition, this questionnaire has not been used before in Kazakhstan. Differences in cultures should be taken into account when comparing the final results obtained from the Aktobe Association of secondary medical workers (Kazakhstan) with previous studies from other countries.

Evaluation of the tool reliability is achieved using Cronbach's α -test. Like most of the tools involved in summing up element scores, the internal sequence of these subscales was evaluated using Cronbach's alpha (Polit & Beck 2008, 455). On the basis of the coefficients of reliability, to evaluation subscales R-MAWS are considered to be sufficiently reliable. In studies conducted by Gagné and colleagues (2012), the total Cronbach ratio $\alpha = 0.88$ (Gagné et al. 2012). And in this study, Cronbach's α of the instrument used is equal to 0.89 on 19 items. This also corresponds to a very good indicator. The questionnaire has good internal consistency when Cronbach's alpha exceed the 0.70 (Macnee & McCabe 2008, according to Jones & Rattray 2015, 416). Cronbach's alpha can be submitted for the entire questionnaire or separately for each subscale (Jones & Rattray 2015, 416). On the basis of reliability coefficients (table. 2), the estimates of the subscales were reliable enough to measure the true assessment of critical factors: external social regulation (0.742), Introjected regulation (0.839), revealed regulation (0.812), internal motivation (0.843). In contrast, the subscales of external material regulation (0.69) and Motivation (0.635). Their reliability is closer to questionable value.

7 Results

7.1 Description of the participants of the study

The majority of respondents (98.1%) were women. Respondents aged 20–34 years composed 35.6%, respondents in the age group 35–45 years 24.2%, and 46–59 years composed 40.2%. The majority of respondents (68.1%) live with a partner. Most of respondents had 1–3 children (70.9%). Of the respondents, 94.7% had specialized secondary education. The responding nurses were experienced as 62.5% had been working in their current specialty for more than 10 years. Of the respondents, 57.3%

worked in an outpatient unit and 9.3% in an inpatient unit, and 33.4% unfortunately did not state their work status. Of the respondents, 24.1% held leadership positions. Most respondents worked in a public institution (See Table 1).

Table 1. Demographic data of nurses participating in the study (n= 323)

Variable		Frequency (f)	Percent (%)
Sex	female	317	98,1
	male	6	1,9
Age	20 – 34	115	35,6
	35 – 45	78	24,2
	46 – 59	130	40,2
Living with partner	no partner	103	31,9
	with partner	220	68,1
Has children in household	no children	48	14,9
	1-3 children	229	70,9
	more than 3 children	46	14,2
Education	secondary	306	94,7
	higher than secondary	17	5,3
Work experience	Until 10 years	120	37,2
	more than 10 years	203	62,8
Type of care	outpatient	185	57,3
	inpatient	30	9,3
	unknown	108	33,4
Occupy a leadership position	yes	78	24,1
	no	245	75,9
Sector of employment	public sector	308	95,4
	private sector	15	4,6

Most of respondents (72.1%) did not want to quit their job. Furthermore, 71.6% of respondents did not want to change their profession, and 87.6% were satisfied with their relations with colleagues. In addition, 58.8% of respondents were satisfied with working conditions. However, almost half (48.6%) of respondents were not satisfied with the level of wages. (See Figure 2.)

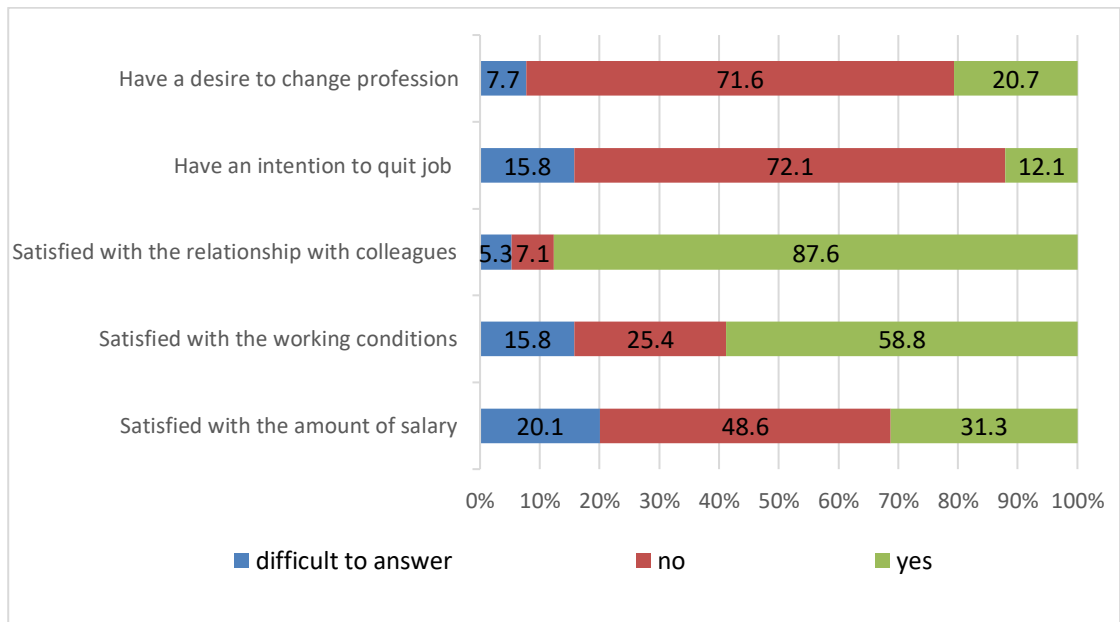


Figure 2. Nurses’ satisfaction with workplace conditions (n = 323)

The most important aspect of work for the respondents was interesting work. Also, high level of salary was noted as an important for nurses. In addition, results show that the favorable working conditions were most important aspect of work for almost every fifth nurse and good friendly team for 15.8%. Friendly attitude of managers to subordinates was seen as most important aspect or work for one tenth of the nurses (See Figure 3).



Figure 3. Percentage distribution of important aspects of nurses’ work (n = 323)

7.2 Nurses' work motivation

Most nurses had strong intrinsic motivation (M-2.43; SD-0.84). The majority of respondents had an average score on internal motivation corresponding to a significant indicator, which indicates that the majority of respondents largely liked their work. That is, most nurses put a lot of effort into their work because work gives them pleasure. Also, nurses showed a strong Identified regulation (M-2.41; SD-0.85) and strong Introjected regulation (M-2.35; SD-0.89). Most of respondents on the identified regulation also have a significant average score, which indicates that the majority of respondents largely have self-determination and value their personal values. That is, most nurses put considerable effort into their work in accordance with their internal beliefs. In addition, many respondents had an average score of near significant for introjected regulation, which indicates that the majority of respondents largely pay attention to their internal feelings. That is, most nurses put considerable effort into their work for the internal satisfaction of their actions. In addition, nurses noted a weak motivation (M-1.37; SD-0.70). The average score of the majority of respondents on amotivation corresponds to a very small indicator, which indicates that the majority of respondents willingly perform their work. That is, most nurses do not agree that the work they do is meaningless and a waste of time. Further, the respondents showed average external regulation (social M-1.92; SD-0.91; material M-1.68; SD-0.88). The majority of respondents on external social regulation had an average score closer to moderate, which shows that the most of respondents need some social support. That is, the majority of nurses are moderately to invest effort in their work with the aim of strengthening and building trust in society. In most of the responses, the average score on external material regulation was low, indicating that the majority of respondents had little or no need for material support. That is, most nurses do not invest in their work for financial encouragement from others. (See Table 2.)

Table 2. Nurses' work motivation

Confidence interval – 95%			
Item	Mean	SD	α
External Regulation (Social)	1,92	0,91	0,742
External Regulation (Material)	1,68	0,88	0,659
Introjected Regulation	2,35	0,89	0,839
Identified Regulation	2,41	0,85	0,812
Intrinsic motivation	2,43	0,84	0,843
Amotivation	1,37	0,70	0,635

Respondents' views ranged from “not at all” to “completely” on a seven-point Likert scale. Results were obtained on the frequency and percentage distribution of responses for all 19 items (See table 3).

Table 3. Frequency and percentage distribution of Aktobe Association of secondary medical workers nurses' work motivation N = (323)

Items		1= not at all	2= very little	3 = a little	4 = moderately	5 = strongly	6 = very strongly	7= completely
		(f) %	(f) %	(f) %	(f) %	(f) %	(f) %	(f) %
Extrinsic Regulation – Social	To get others' approval	(96) 29,7%	(26) 8%	(27) 8,4%	(55) 17%	(52) 16,1%	(17) 5,3%	(50) 15,5%
	Because others will respect me more	(82) 25,4%	(32) 9,9%	(36) 11,1%	(44) 13,6%	(50) 15,5%	(17) 5,3%	(62) 19,2%
	To avoid being criticized by others	(93) 28,8%	(23) 7,1%	(31) 9,6%	(58) 18%	(49) 15,2%	(10) 3,1%	(59) 18,3%
Extrinsic Regulation – Material	Because others will reward me financially only if I put enough effort in my job	(143) 44,3%	(35) 10,8%	(41) 12,7%	(28) 8,7%	(30) 9,3%	(11) 3,4%	(35) 10,8%
	Because others offer me greater job security if I put enough effort in my job	(128) 39,6%	(27) 8,4%	(45) 13,9%	(38) 11,8%	(34) 10,5%	(7) 2,2%	(44) 13,6%

	Because I risk losing my job if I don't put enough effort in it	(105) 32,5%	(29) 9%	(32) 9,9%	(39) 12,1%	(48) 14,9%	(17) 5,3%	(53) 16,4%
Introjected Regulation	Because I have to prove to myself that I can	(37) 11,5%	(14) 4,3%	(18) 5,6%	(35) 10,8%	(54) 16,7%	(31) 9,6%	(134) 41,5%
	Because it makes me feel proud of myself	(63) 19,5%	(9) 2,8%	(21) 6,5%	(32) 9,9%	(61) 18,9%	(26) 8%	(111) 34,4%
	Because otherwise I will feel ashamed of myself	(57) 17,6%	(18) 5,6%	(18) 5,6%	(28) 8,7%	(44) 13,6%	(32) 9,9%	(126) 39%
	Because otherwise I will feel bad about myself	(62) 19,2%	(15) 4,6%	(30) 9,3%	(28) 8,7%	(57) 17,6%	(28) 8,7%	(103) 31,9%
Identified Regulation	Because I personally consider it important to put efforts in this job	(34) 10,5%	(12) 3,7%	(12) 3,7%	(26) 8%	(70) 21,7%	(26) 8%	(143) 44,3%
	Because putting efforts in this job aligns with my personal values	(55) 17%	(10) 3,1%	(32) 9,9%	(32) 9,9%	(60) 18,6%	(27) 8,4%	(107) 33,1%
	Because putting efforts in this job has personal significance to me	(45) 13,9%	(12) 3,7%	(28) 8,7%	(36) 11,1%	(57) 17,6%	(35) 10,8%	(110) 34,1%
Intrinsic Motivation	Because I have fun doing my job	(25) 7,7%	(19) 5,9%	(18) 5,6%	(38) 11,8%	(62) 19,2%	(37) 11,5%	(124) 38,4%
	Because what I do in my work is exciting	(53) 16,4%	(22) 6,8%	(18) 5,6%	(36) 11,1%	(59) 18,3%	(37) 11,5%	(98) 30,3%
	Because the work I do is interesting	(27) 8,4%	(17) 5,3%	(24) 7,4%	(33) 10,2%	(51) 15,8%	(30) 9,3%	(141) 43,7%
Amotivati on	I don't, because I really feel that I'm wasting my time at work	(223) 69%	(28) 8,7%	(21) 6,5%	(16) 5%	(16) 5%	(5) 1,5%	(14) 4,3%

I do little because I don't think this work is worth putting efforts into	(147) 45,5%	(30) 9,3%	(30) 9,3%	(33) 10,2%	(28) 8,7%	(9) 2,8%	(46) 14,2%
I don't know why I'm doing this job, it's pointless work	(227) 70,3%	(27) 8,4%	(28) 8,7%	(12) 3,7%	(11) 3,4%	(8) 2,5%	(10) 3,1%

7.2.1 Nurses' external regulation

7.2.1.1 External social regulation

According to external social regulation, more than a quarter of respondents recognized that they are making efforts in their work to obtain the approval and respect of others, so as not to be criticized. However, about a third of respondents do not pay attention to the opinions of others. (See Figure 4).

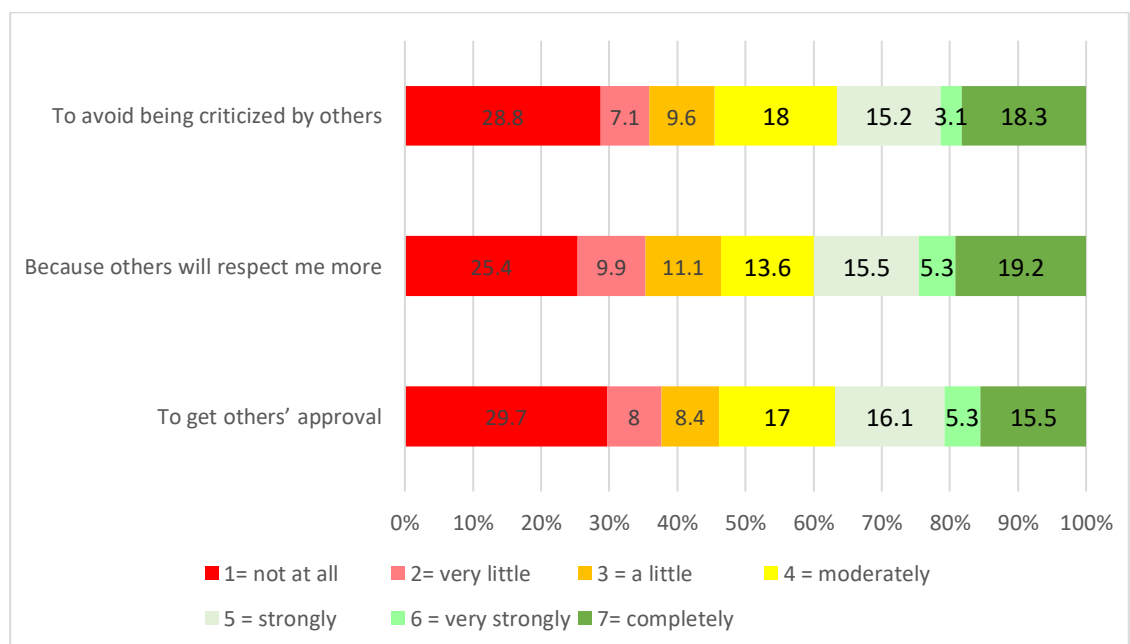


Figure 4. Percentage distribution for extrinsic social regulation of nurses (n = 323)

The relationship between the age of nurses and external social regulation was statistically significant ($\chi^2=8.974$; $df=4$; $p=0.05$). It can be noted that more than half

(51.4%) of young nurses do not seek to earn respect among others. In contrast, 47% of older respondents worked for respect of others.

7.2.1.2 External material regulation

The results on external material regulation have shown that more than a third of respondents are not afraid of being unemployed and do not need financial support. Only about a quarter of respondents recognized material dependence in their work.

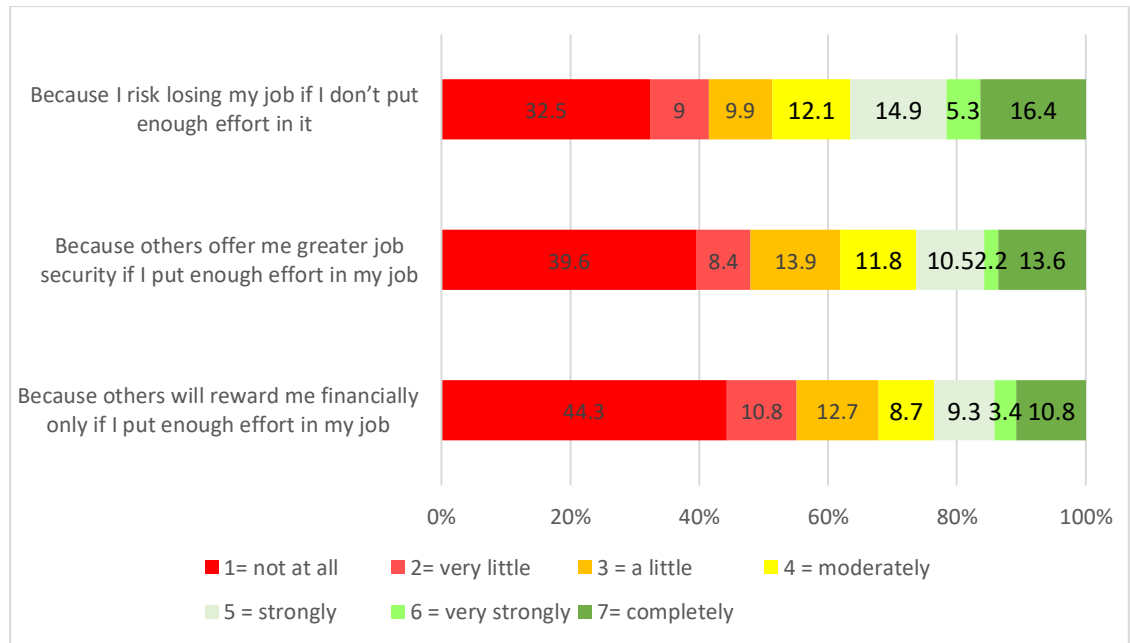


Figure 5. Percentage distribution for extrinsic material regulation of nurses (n = 323)

7.2.2 Introjected Regulation

According to the results of the introjected regulation, more than a third of nurses admitted that they were making efforts in their work to prevent feelings of guilt and shame, and that they were worried about their reputation. In contrast, more than a quarter of respondents noted that they do not experience internal regulation. (See Figure 6).

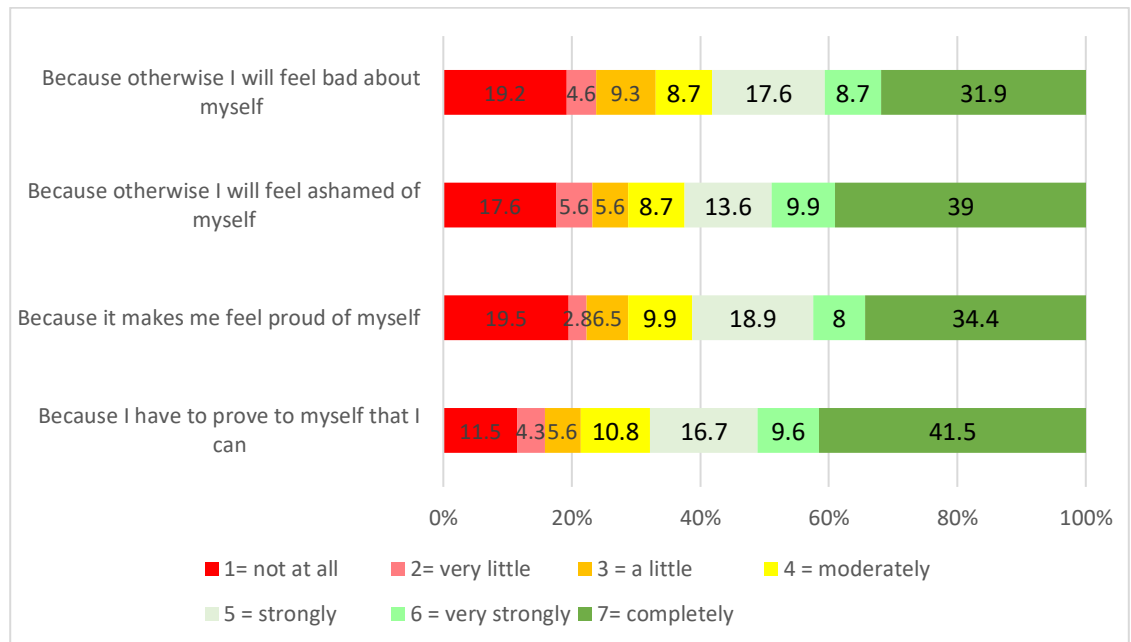


Figure 6. Percentage distribution for introjected regulation of nurses (n = 323)

The relationship between the age of nurses and introjected regulation was significant. 53.9% of young respondents, 64.1% of middle-aged respondents, and 69.2% of older respondents indicated that putting efforts into this job completely corresponded with not being ashamed of oneself ($\chi^2=10.002$; $df=4$; $p=0.05$). In addition, 65.2% of senior nurses responded that they make an effort in their work not to feel bad about themselves. However, only 49.6% of young nurses gave this opinion ($\chi^2=11.342$; $df=4$; $p=0.025$). Also, in accordance with this statement, a relationship was found between experience and introjected regulation ($\chi^2=6.717$; $df=2$; $p=0.025$). Thus, 61.4% of respondents with more than 10 years of experience completely share the opinion that they put efforts into their job not to feel bad about themselves, unlike nurses with less than 10 years of experience (52.9%).

7.2.3 Identified Regulation

According to identified regulation, responses showed that more than a third of nurses worked because their work corresponded to their personal values and life position. However, about a quarter of respondents admitted that the work had no personal significance for them (see Figure 7).

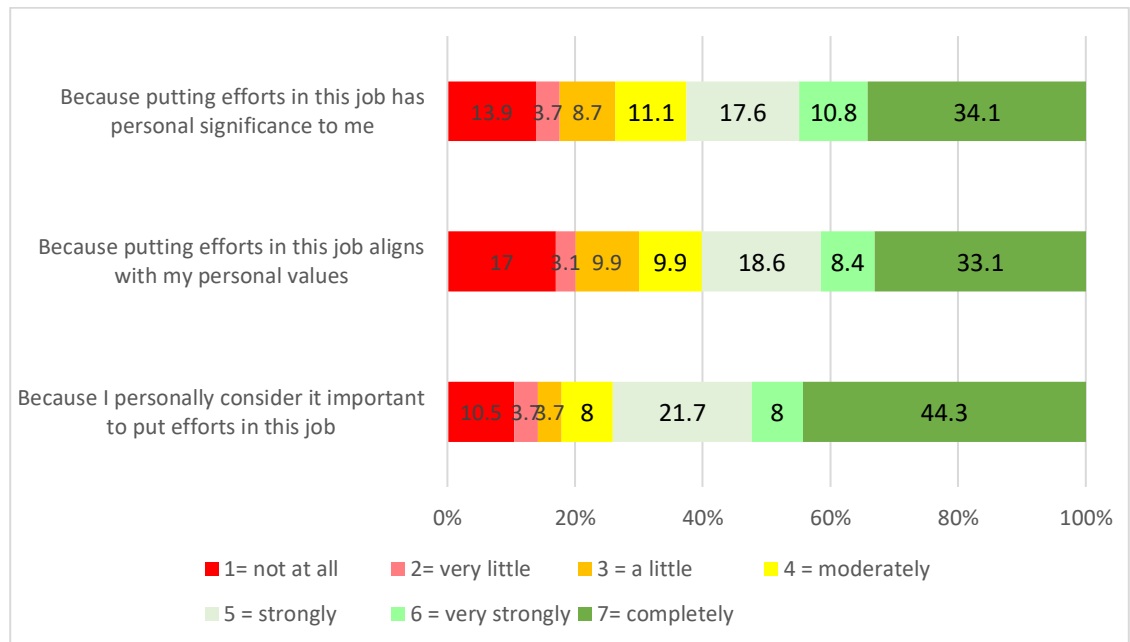


Figure 7. Percentage distribution for identified regulation of nurses (n = 323)

A statistically significant relationship between age and identified regulation was revealed. Unlike young nurses, older respondents were almost fifth more of the opinion (83.8%) that they personally consider it important to make an effort in their work ($\chi^2=14.574$; $df=4$; $p=0.01$). Seventy percent of older respondents thought that their work efforts completely correspond with their personal values. In contrast, only 47.8% of young respondents see that putting efforts into their job completely align with their values ($\chi^2=13.157$; $df=4$; $p=0.01$). Of senior nurses, 72.3% said that putting efforts in this job completely has a personal significance, whereas for younger nurses the figure was a mere 51.3% ($\chi^2=15.220$; $df=2$; $p=0.01$). Also, statistically significant was the connection of experience with the identified regulations. In all the statements, nurses with more than 10 years of experience completely support the statements: 77.7% completely believe that it is personally important for them to invest in this work ($\chi^2=5.936$; $df=2$; $p=0.05$) and in general, 65.3% of respondents said that investing in this work corresponds to their personal values ($\chi^2=6.349$; $df=2$; $p=0.05$). In addition, 68.3% of nurses with 10 or more years of experience noted that the efforts made in this work are completely personally significant to them ($\chi^2=8.388$; $df=2$; $p=0.01$). Unlike respondents with more than 10 years of experience, nurses working less than 10 years showed lower percentages.

7.2.4 Intrinsic motivation

According to internal motivation, more than a third of respondents worked completely with pleasure because the work was interesting and exciting. About a fifth of nurses did not experience the joy and inner pleasure of working (see Figure 8).

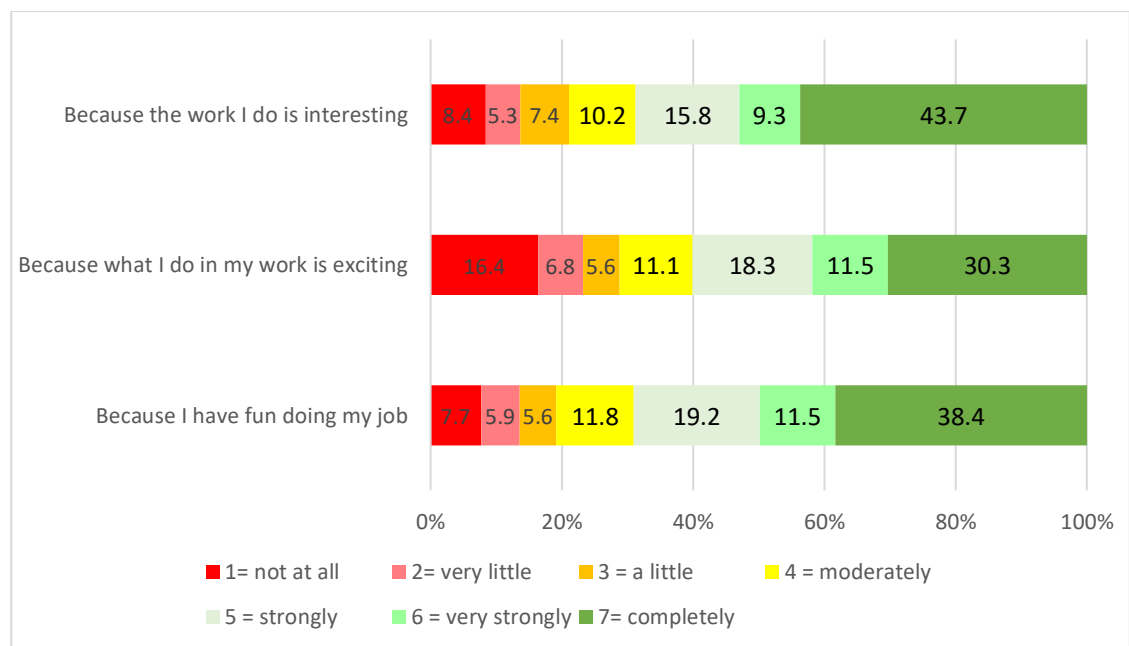


Figure 8. Percentage distribution for intrinsic motivation of nurses (n = 323)

The relationship between years in nursing and intrinsic motivation was statistically significant. Significant results on internal motivation showed that young respondents were less internally motivated than older colleagues. Of young respondents, 58.2% completely corresponded with the statement that they have fun doing their job ($\chi^2=13.197$; $df=4$; $p=0.01$). In contrast, 79.2% of older respondents completely corresponded to putting effort into work since they have fun doing their job. With the statement "Because what I do in my work is exciting" ($\chi^2=15.382$; $df=4$; $p=0.01$), 70% of senior nurses completely view that as reason to put effort into work, whereas only 46.1% of young nurses felt the same. In addition, 74.6% of older respondents said that they are making efforts in their work because the work is interesting. ($\chi^2=12.408$; $df=4$; $p=0.01$). Also, 67% of young respondents fully share this statement, and 61.5% of middle-aged respondents supported this opinion. Statistical significance was also shown by the connection of work experience with internal motivation. Nurses with more than 10 years of experience had more internal

motivation than nurses with less than 10 years of experience. Thus, the majority of nurses with more experience (73.3%) said that they had fun doing their job ($\chi^2=4.926$; $df=2$; $p=0.01$), while the opinion of 62% of respondents with less than 10 years of experience is completely consistent with this statement. Of respondents with more than 10 years of experience, 64.9% worked because their work is exciting ($\chi^2=6.061$; $df=2$; $p=0.05$), and 52.1% of nurses with less experience also shared this opinion. In addition, respondents of both groups noted that they do the work because the work is interesting (by age group - $\chi^2=12.408$; $df=4$; $p=0.01$; by experience - $\chi^2=3.469$; $df=2$; $p=0.10$).

7.2.5 Amotivation

Results on amotivation show that most nurses do not believe that they are wasting time at work and that their work is meaningless (Figure 9).

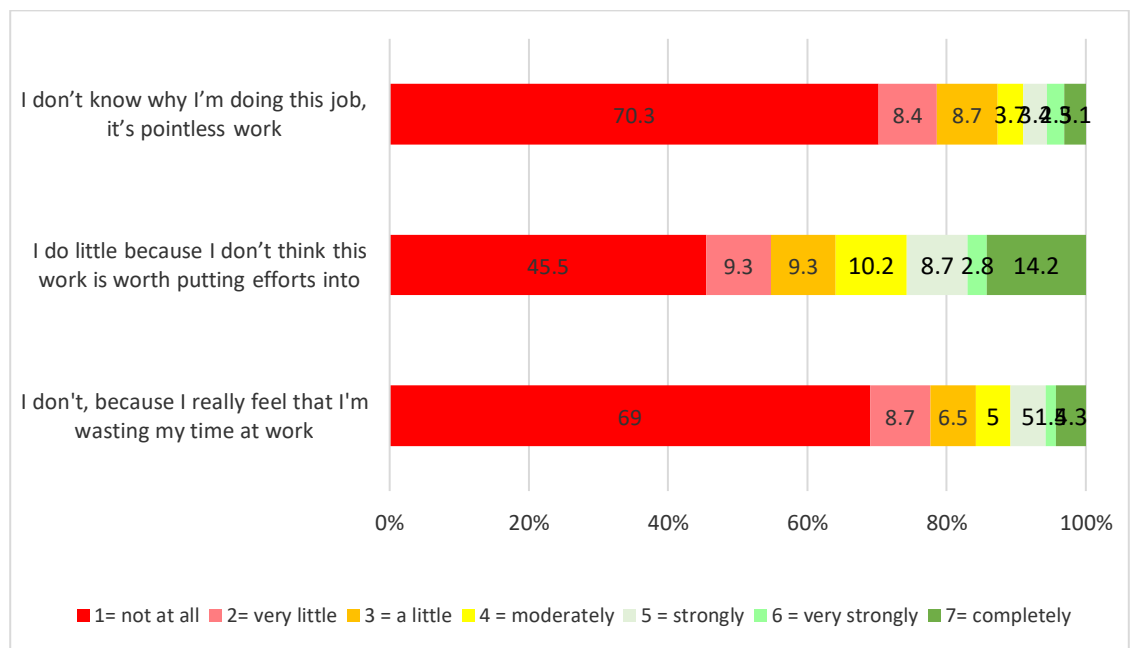


Figure 9. Percentage distribution for amotivation of nurses (n = 323)

The relationship between amotivation and age of nurses ($\chi^2=5.136$; $df=4$; $p=0.10$) and work experience ($\chi^2=2.490$; $df=2$; $p=0.10$) was significant. Most of the respondents do not think that they just spend time at work (more than 80%). However, about 14% of young and middle-aged respondents, as well as nurses with less than 10 years of experience, completely shared the opinion that they are wasting their time at work.

8 Discussion

The purpose of the study was to reveal the factors affecting work motivation of nurses who are members of the Aktobe Association of secondary medical workers. The objectives of the research were to examine the factors of nurses' motivation based on international experience and to determine the main factors of nurses' work motivation of Aktobe Association of secondary medical workers. To achieve this goal, a literature review was conducted in the CINAHL database on the choice of a data collection tool. After careful analysis, the R-MAWS tool (Gagné et al. 2012) was selected. For the instrument to be equally natural and acceptable and to function in a similar manner, the instrument underwent a process of translation and adaptation, where emphasis was on cross-cultural and conceptual equivalence. Quantitative measurement with the use of these tools allowed to objectively obtain relatively accurate information (Polit & Beck, 2008) about the work motivation of nurses in Kazakhstan and the factors affecting them. To calculate the sample size, an online calculator was used, which calculated the sample size in amount 318 at a confidence interval of 95±5%, which ensured the sufficiency of the sample size to obtain significant results (Polit & Beck, 2008). Thus, the results can be generalized for all nurses of Aktobe Association of secondary medical workers.

According to the obtained demographic data it can be noted that the majority of respondents were women with secondary level of education working as ordinary nurses in the state structure. As mentioned above, the aim was to investigate nurses working in PHC, but according to the data received, only slightly more than half of the respondents noted that they work in PHC. Unfortunately, a third of the nurses interviewed did not indicate their place of work. In this regard, we cannot generalize the results for all nurses working in the field of PHC.

In the course of this study, the external and internal motivation of nurses of the Aktobe Association of secondary medical workers was studied using the R-MAWS tool, which was based on the theory of self-determination Ryan and Deci (Gagné et al. 2012). Based on reliability coefficients (Table 2), the assessment of subscales was reliable enough to measure the true assessment of critical factors: External Social Regulation (0,742), Introjected Regulation (0,839), Identified Regulation (0,812), and

Intrinsic Motivation (0,843). For subscales External Material Regulation (0,69) and Amotivation (0,635), their reliability factor was closer to the questionable value.

The main result of this study is that regarding external social regulation, the results show that most nurses were satisfied with their relationships with colleagues and working conditions. This result differs from the results of the study by Daneshkohan and others (2015), where the first demotivating factor is the unfair attitude on the part of management and colleagues. Also, good working relationships with colleagues were identified as an important aspect. The results of this study indicate that the friendly attitude of managers and favorable working conditions are average in importance of work-related factors. The results were not consistent with the results of Iranian colleagues, according to which the most important motivating factor for Tehran's medical workers is good personnel management (Daneshkohan et al. 2015). The results of the study showed that the majority of nurses of the Aktobe Association of secondary medical workers are moderately in need of social support.

Secondly, the study revealed that according to the results of external material regulation, about half of nurses are not satisfied with the salary level. Contrary to expectations, most of the respondents are true to their work, and do not want to quit or change their profession (See Figure 2). This result was unexpected, as the turnover of worker staff is mainly associated with material values (Öztürk, Bahcecik, & Baumann 2006; Curtis, Upchurch, & Severt 2009). These findings are consistent with the findings of Iranmanesh and others (2014) that despite low wages in the Iranian health care system, female nurses do not leave work. Also, according to Ojaka and others (2014), for Kenyan health workers, financial reward was the most important factor of motivation and retention in work. Respondents preferred private medical organizations and organizations outside the country to search for better working conditions. These findings contradict those of Gupta and others (2014), who found that nurses at public hospitals in India are more satisfied with their salaries. This is due to the fact that in India, the wages of qualified health professionals are higher than in Kazakhstan. Moreover, the nurses of the Aktobe Association of secondary medical workers noted the high level of wages as one of the most important aspects of labor, which emphasizes the relevance of this factor. However, according to external material regulation, the average score is low (M-1.68; SD-0.88,

see Table 2), which indicates that the majority of respondents do not need financial support. These findings contradict the above findings of this study. Perhaps this is because the nurses of the Aktobe Association of secondary medical workers do not perceive "financial reward" as salary.

Thirdly, the results of this study showed that for introjected regulation, the average was closer to strong ($M=2.35$; $SD=0.89$, see Table 2). Also, this is evidenced by the percentage of responses. More than a third of respondents completely with all the statements of this sub-scale (See Figure 6). Such findings were consistent with the findings of Toode and others (2015), according to which Estonian nurses also had a higher level of introjected regulation. Our research shows that most nurses are motivated to work in order to avoid internal negative feelings. Also, it shows that nurses do their job to avoid feelings of guilt or anxiety and strive to increase their ego or pride (Ryan & Deci 2000). This is evidenced by the conclusions of the Finnish colleagues that the majority of Estonian nurses work hard because they are afraid of falling short of expectations, failing, and losing the respect of others (Toode et al. 2015).

Fourthly, the results of the study showed that regarding identified regulation, the average score was also closer to strong ($m=2.41$; $SD=0.85$, see Table 2). These results are consistent with the results of Bodur & Infal (2015), where intrinsic motivation based on the self-concept has been recognized as the most important source of motivation for Turkish nurses working in public hospitals. This type of regulation is a more autonomous form of extrinsic motivation and a person's behavior corresponds to his personal values (Ryan & Deci 2000). In a study by Galletta and others (2016), they combined autonomous forms of motivation (internal and identified motivation). The results have shown the relationship between autonomous motivation and job satisfaction. It was explored how self-determination plays a crucial role in the internalization process, contributing to autonomous behaviour and influencing organizational affective commitment, job satisfaction, work motivation and performance, as well as intentions to quit. These results have helped to better explain the motivational processes that underlie a positive attitude towards work among health workers. (Galletta et al. 2016.) A high level of intrinsic motivation is found in practicing nurses who work hard and have greater responsibility for the

work done, as opposed to nursing managers who are not directly involved in nursing practice. However, a weak source of motivation among Turkish nurses revealed intrinsic process motivation. That is, high internal motivation may decrease over time due to the lack of autonomy of nurses and diversity of work. (Bodur & Infal 2015.)

In the fifth, in the study of internal motivation of nurses of the Aktobe Association of secondary medical workers, the results of the study showed that the majority of nurses have a strong internal motivation (see Table 2, Figure 8). These findings are consistent with the findings of Hee and others (2016) that intrinsic motivation plays a key role in the work of Malaysian nurses. Also, these results are confirmed by the study Lambrou and others (2010), conducted among doctors and nurses in Cyprus, where it was found that achievements in work as an internal motivator occupy an important place among other motivators. In our study, more than a third of respondents said that their work is interesting and exciting, that they are happy to do their job. This indicates that the nurses providing medical care are satisfied with their actions. Such findings are supported by the findings of Hee and others (2016), where it is noted that career development, improved jobs, and greater autonomy of nurses will also increase their productivity.

In addition, in the course of this study, a statistically significant relationship was found between the age and experience of nurses with intrinsic motivation. According to the results, young respondents with less than 10 years of experience were less internally motivated than their older colleagues with more experience. These conclusions are not consistent with the conclusions of Toode and others (2015), as Estonian nurses, regardless of age and work experience, had the internal motivation to work. Also statistically significant results were obtained for identified motivation connection with age. It should be noted that most of the older generation of nurses make efforts in their work due to their personal values. That is, it can be noted that autonomous forms of motivation are stronger in the older generation with extensive experience. Moreover, the results of this study revealed that the younger generation of nurses of the Aktobe Association of secondary medical workers as a whole is less externally and internally motivated than the older generation of nurses.

9 Conclusion

The results of this study showed that most nurses are satisfied with their relationships with colleagues and working conditions. They noted the friendly attitude of managers and favorable working conditions as medium-important aspects of the work. Although social conditions were of moderate importance for nurses, employers are advised not to ignore this aspect. To do this, it is necessary to improve the management in nursing that encourages autonomy, improve the satisfaction and motivation of nurses, also increases revenue. According to this study, about half of nurses are not satisfied with the level of wages. However, along with these data, the majority of respondents remained true to their work and do not want to leave or change their profession. Moreover, nurses of the Aktobe Association of secondary medical workers noted the high level of wages as one of the most important aspects of labor, which emphasizes the relevance of this factor. In this regard, the government and employers are encouraged not to ignore the income of health workers. Also, the results have shown that the majority of respondents work for internal self-satisfaction at experiencing anxiety due to shame or guilt of outstanding work. Unfortunately, it is difficult for these nurses to feel positive confidence in their actions. However, the results have shown that most nurses make efforts to work in connection with their personal values that benefit them in achieving the goal. This affects the personal well-being and desire of the nurse. Moreover, the results of the study revealed that nurses have a strong internal motivation. They are inspired by their work which brings them pleasure. In contrast, most nurses have low amotivation to work which confirms their high work motivation.

It should be noted that there are differences in the responses of different age groups and groups of work experience. It can be noted that autonomous forms of motivation are stronger for those of the older generation with more experience. Moreover, the results of this study showed that the younger generation of nurses of the Aktobe Association of secondary medical workers is generally less externally and internally motivated than the older generation of nurses. However, the results of nurses of other age groups should not be ignored, as they make up the majority of all respondents. In general, it is necessary to increase the external and internal factors

of nurses' work motivation. This mainly depends on the management strategy of the medical organization and state support.

In conclusion, this study serves to increase the evidence base, which provides comprehensive information on what factors deserve support and further research to develop effective motivational strategies for nurses. According to the Comprehensive plan for the development of nursing in Kazakhstan (Comprehensive nursing development plan in the Republic of Kazakhstan until 2020, 2014), in order to bring the nursing system in Kazakhstan to the international level, it is necessary to increase the motivation of nurses in order to reduce the outflow of nurses from nursing.

10 Recommendations for employers, education, nurses' associations and for future research

To provide quality nursing care, it is necessary to maintain the motivation of nurses at all times in order to increase job satisfaction and reduce the turnover of nursing staff. To do this, employers must systematically assess and provide the necessary conditions to increase employee motivation. This can be achieved by conducting feedback of leadership with subordinates to create a friendly attitude and support from managers and favorable working conditions. Such actions will help to develop motivational strategies in the management of nursing.

The key to well-being for most nurses is salary. Thus, it is necessary to create conditions for increasing the income of nurses, which will improve the quality of life of nurses. This will help to raise the status of a nurse. This issue has been taken under the control of the state and from June 2019, it has been planned to raise the wages of all medical workers, including nurses. This will undoubtedly increase the motivation of employees. It is also necessary for the employer to individually encourage nurses for their efforts in providing quality nursing care.

To reduce internal anxiety and uncertainty of their actions in the framework of nursing education, it is necessary to develop students' independence and focus on self-reflection. These skills will help the future nurse to be more aware, confident,

and independent in nursing care. In addition, when applying for nursing, it is recommended to factor in the internal motivation of candidates for future activities. One way to conduct this is the introduction of a psychometric test for applicants entering medical colleges and higher medical colleges. This test for future doctors and nurses is conducted only in medical universities of Kazakhstan.

It is also necessary to explain to nurses the possibility of career growth when entering higher medical colleges and universities for applied bachelor's, academic bachelor's, and master's degrees. This, respectively, depends on the level of initial education of nurses.

The results of this study confirmed the need to develop autonomous motivation of young nurses of the Aktobe Association of secondary medical workers. Therefore, nurses need to be given opportunities to develop their skills and improve in the performance of their work. Collecting data from this study using a questionnaire in itself was a useful example as it pushed nurses to self-reflection to make conscious judgments about their own feelings in the workplace. Moreover, it is necessary to take into account both external and internal factors of motivation of nurses regardless of age and experience since each factor is of particular importance in the work of nurses.

For future research in the field of work motivation of nurses, it is recommended to conduct a study using the R-MAWS tool with the addition of open questions for quantitative and qualitative research among nurses in all regions of Kazakhstan for a comprehensive study of the factors of work motivation and coverage of nurses across the country as well as a comprehensive study of factors affecting nurses' work motivation throughout Kazakhstan based on international experience.

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Appendices

Appendix 1. Analysis of questionnaires

Research	Main concepts used in the theory part of the article	Name on Questionnaire	The authors of the Questionnaire	Nro of questions of each dimensions	Usage:
Faris, Douglas, Maples, Berg & Thrailkill 2010	job satisfaction and barriers to practice for advanced practice nurses	Misener Nurse Practitioner Job Satisfaction Survey (MNPJS S) Investigator-developed questionnaire	Misener & Cox, 2001	44 items a 6-point Likert scale 27-item	Kacel, Miller, and Norris (2005) Schiestel (2007) Domine et al. (1998) Journal of the American Academy of Nurse Practitioners Impact factor 0,931
De Milt, Fitzpatrick & Sister Rita McNulty 2011	job satisfaction and anticipated turnover	Misener Nurse Practitioner Job Satisfaction Survey (MNPJS S) Anticipated Turnover Scale (ATS)	Misener & Cox Hinshaw and Atwood	44-item Likert- 12-items Likert	Kacel et al., 2005 Schiestel, 2007 Bryant-Lukosius et al., 2007
Toode, Routasalo & Suominen 2011	work motivation, self-determination theory	Motivation at Work Scale (MAWS)	Gagné et al.	12-items	Scandinavian Journal of Caring Sciences Impact factor 1,438

Bakay & Huang 2010	Intrinsic-Extrinsic Motivation and Job Outcomes	Items for Intrinsic & Extrinsic Motivation Organizational Culture	Amabile, Hill, Hennessey, Tighe Deshpande & Farley	30 – items items contains four descriptions of organizations	
Altindis 2011	organizational commitment, workmotivation	Organizational Commitment Questionnaire Motivation Questionnaire	Meyer & Allen developed based on Mottaz (1985), Brislin et al. (2005), and Mahaney and Lederer's (2006)	18-items 16-items	Dünder et al, 2007
Iranmanesh, Fuladvandi, Ameri & Bahrampoor 2014	Organizational commitment and job motivation	Organizational commitment scale (OCS) Job Motivation scale (JM)	Meyer & Allen Ebadi	24-items 41-items	Homai, 2003; Soltan Hussein et al, 2005; Sabbaghian et al, 2006, Mehrdad (2012) Mahmoudi et al., (2008)
Maura Galletta, Igor Portoghese, Sergio Pili, Maria Francesca Piazza and Marcello Campagna	Job autonomy Perceived organizational support	Motivation at Work Scale (MAWS); Organizational Commitment Questionnaire;	Gagné et al. Meyer & Allen	8-items 6-items	

		Survey of Perceived Organizational Support (SPOS); Work Design Questionnaire (WDQ) QSO (Organizational Satisfaction Questionnaire)	Battistelli & Mariani Morgeson & Humphrey Cortese	4-items 9-items 9-items	
Akansel, N. Özkaya, G. Ercan, I. Alper, Z. 2011.	Job satisfaction	job satisfaction scale developed by researchers according to literature review	Akansel, et all	36-items	
Lambrou, P., et all. 2010.	Job satisfaction and motivation	questionnaire based on Maslow's needs theory and Herzberg's two factor theory	Lambrou, P., et all.	19-items	Journal "Human Resources for Health" IF 2 year – 1.780 IF 5 year -2.264

Gupta, M. Reddy, S. Prabha, C. & Chandna, M. 2014.	Job Satisfaction Turnover	questionnaire to measure Job Satisfaction of nurses	Gupta, et all	15 variables	
Tellez, M. 2012.	job satisfaction staffing law	California Board of Registered Nursing (BRN) Survey	Fletcher, Guzley, Barnhill, & Philhour	30 items	Spetz, 2008
Cummings, Olson, Raymond-Seniuk, Lo, Masaoud, Bakker, Fitch, Green, Butler & Conlon 2013	job satisfaction environment factors	Nursing Work Index-Revised (NWI-R)	Aiken & Patrician	14 items	Lake, 2002; Li et al., 2007; Slater & McCormack, 2007
Skinner, Madison & Humphries 2010	factors linked with job satisfaction	questionnaire based on a comprehensive literature review	Skinner et al	37 items	Australian Journal of Advanced Nursing Impact factor 0.333
Oladotun & Öztüren	Motivating factors, Job Satisfaction	Job Satisfaction Survey Instrument (based on Herzberg two-factor theory)	Smerek and Peterson's	59 items	

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Appendix 2. Cover letter of permission to collect data

To the Chairman of the Aktobe Association of secondary medical workers

Dear Rakhima Karimovna!

I am a master student of Joint two Degree Master Programme in Advanced Nursing Practice from JAMK University of Applied Sciences, Finland & Kazakh Medical University of Continuing Education, Kazakhstan writing my dissertation tentatively titled "Factors affecting the increase of nurses' work motivation" under the direction of my dissertation committee chaired by Dr. Johanna Heikkilä & Dr. Dinara Ospanova.

The purpose of this study is to reveal the factors that influence the motivation of nurses. In my research I am going to examine the factors of motivation of nurses on the basis of international experience. And also, to identify the main factors of nurses' work motivation of Aktobe Association of secondary medical workers.

The data of my research are nurses, who work practice. **Exclusion criteria** will be nurses without work experience, nurses who are on maternity leave, retired nurses. 300 participants who approach these criteria will be surveyed. By data collection the researcher will use questionnaire.

I would like to ask you to send my questionnaire for all nurses, who:

- participate in your association
- are between 20 to 50 years
- working in primary health care with experience

If these are acceptable, please indicate so by sending e-mail form.

Sincerely, Gulzhan Beisegulova, Master Candidate, KazMUCE, Almaty, Kazakhstan.

If you need more information, please take contact to:

Johanna Heikkilä, PhD, Senior Advisor JAMK University of Applied Sciences, Finland

Dinara Ospanova, as. professor, DmedSc, PhD KazMUCE, Kazakhstan.

Appendix 3. Cover letter of permission to the participants

Dear nurse!

I am a master student of Joint two Degree Master Programme in Advanced Nursing Practice from JAMK University of Applied Sciences, Finland & Kazakh Medical University of Continuing Education, Kazakhstan writing my dissertation tentatively titled "Factors affecting the nurses' work motivation in Kazakhstan" under the direction of my dissertation committee chaired by Dr. Johanna Heikkilä & Dr. Dinara Ospanova.

The purpose of this study is to reveal the factors that influence the motivation of nurses. In my research I am going to examine the factors of motivation of nurses on the basis of international experience. And also, to identify the main factors of nurses' work motivation of Aktobe Association of secondary medical workers.

The study will be conducted anonymously. Participation in the study is completely voluntary, and refusing to provide information will not affect your work. The survey will be conducted at a time convenient for you.

As a researcher, I undertake to comply with the existing guidelines for the preservation of legislation in the field of research and data protection.

The results of the study will be described in the master's thesis and in an article that will be published in international scientific journals. The research material will be destroyed after the completion of the research.

By agreeing, you voluntarily consent to the use of the survey results for research purposes.

Sincerely, Gulzhan Beisegulova, Master student KazMUCE, Almaty, Kazakhstan.

Appendix 4. External social regulation on age groups

Item	Age	not at all / very little / a little	moderately	Strongly / very strongly / completely	Chi-Square	P-value
To get others' approval	20-34	47,8%	17,4%	34,8%	0,978	0,90
	35-45	47,5%	17,9%	34,6%		
	46-59	43,8%	16,2%	40%		
Because others will respect me more	20-34	51,4%	12,2%	36,4%	8,974	0,05
	35-45	44,9%	21,8%	33,3%		
	46-59	43%	10%	47%		
To avoid being criticized by others	20-34	46,1%	17,4%	36,5%	6,618	0,10
	35-45	38,4%	26,9%	34,7%		
	46-59	49,2%	13,1%	37,7%		

Appendix 5. External social regulation on work experience

Item	Work experience	not at all / very little / a little	moderately	Strongly / very strongly / completely	Chi-Square	P-value
To get others' approval	until 10 years	43,8%	19,8%	36,4%	0,880	0,90
	more than 10 years	47%	15,8%	37,2%		
Because others will respect me more	until 10 years	47,1%	12,4%	40,5%	0,247	0,90
	more than 10 years	46%	14,4%	39,6%		
To avoid being criticized by others	until 10 years	43%	17,3%	39,7%	0,833	0,90
	more than 10 years	47%	18,3%	34,7%		

Appendix 6. External material regulation on age groups

Item	Age	not at all / very little / a little	moderately	Strongly / very strongly / completely	Chi-Square	P-value
Because others will reward me financially only if I put enough effort in my job	20-34	73%	9,6%	17,4%	4,796	0,10
	35-45	67,9%	9%	23,1%		
	46-59	63,1%	7,7%	29,2%		
Because others offer me greater job security if I put enough effort in my job	20-34	61,7%	16,6%	21,7%	7,964	0,10
	35-45	64,1%	12,8%	23,1%		
	46-59	60,8%	6,9%	32,3%		
Because I risk losing my job if I don't put enough effort in it	20-34	54,8%	14,8%	30,4%	6,037	0,10
	35-45	46,1%	15,4%	38,5%		
	46-59	51,5%	7,7%	40,8%		

Appendix 7. External material regulation on work experience

Item	Work experience	not at all / very little / a little	moderately	Strongly / very strongly / completely	Chi-Square	P-value
Because others will reward me financially only if I put enough effort in my job	until 10 years	71,1%	9,9%	19%	2,334	0,90
	more than 10 years	65,8%	7,9%	26,3%		
Because others offer me greater job security if I put enough effort in my job	until 10 years	59,5%	19%	21,5%	0,247	0,90
	more than 10 years	63,4%	7,4%	39,6%		
Because I risk losing my job if I don't put enough effort in it	until 10 years	43%	17,3%	39,7%	0,833	0,90
	more than 10 years	47%	18,3%	34,7%		

Appendix 8. Introjected Regulation on age groups

Item	Age	not at all / very little / a little	moderately	Strongly / very strongly / completely	Chi-Square	P-value
Because I have to prove to myself that I can	20-34	25,2%	12,2%	62,6%	2,416	0,90
	35-45	19,2%	9%	71,8%		
	46-59	19,2%	10,8%	70%		
Because it makes me feel proud of myself	20-34	33%	12,2%	54,8%	4,581	0,10
	35-45	21,8%	9%	69,2%		
	46-59	29,2%	8,5%	62,3%		
Because otherwise I will feel ashamed of myself	20-34	38,3%	7,8%	53,9%	10,002	0,05
	35-45	23,1%	12,8%	64,1%		
	46-59	23,9%	6,9%	69,2%		
Because otherwise I will feel bad about myself	20-34	44,3%	6,1%	49,6%	11,342	0,025
	35-45	29,5%	11,5%	59%		
	46-59	25,4%	9,2%	65,4		

Appendix 9. Introjected Regulation on work experience

Item	Work experience	not at all / very little / a little	moderately	Strongly / very strongly / completely	Chi-Square	P-value
Because I have to prove to myself that I can	until 10 years	24%	12,4%	63,6%	1,545	0,90
	more than 10 years	19,8%	9,9%	70,3%		
Because it makes me feel proud of myself	until 10 years	28,9%	12,4%	58,7%	1,378	0,90
	more than 10 years	28,7%	8,4%	62,9%		
Because otherwise I will feel ashamed of myself	until 10 years	33,9%	8,3%	57,8%	2,458	0,90
	more than 10 years	25,7%	8,9%	65,4%		
Because otherwise I will feel bad about myself	until 10 years	41,3%	5,8%	52,9%	6,717	0,025
	more than 10 years	28,2%	10,4%	61,4%		

Appendix 10. Identified Regulation on age groups

Item	Age	not at all / very little / a little	moderately	Strongly / very strongly / completely	Chi-Square	P-value
Because I personally consider it important to put efforts in this job	20-34	22,6%	12,2%	65,2%	14,574	0,01
	35-45	18%	11,5%	70,5%		
	46-59	13,9%	2,3%	83,8%		
Because putting efforts in this job aligns with my personal values	20-34	40%	12,2%	47,8%	13,157	0,01
	35-45	26,9%	11,6%	61,5%		
	46-59	23,1%	6,9%	70%		
Because putting efforts in this job has personal significance to me	20-34	31,3%	17,4%	51,3%	15,220	0,01
	35-45	24,4%	12,8%	62,8%		
	46-59	23,1%	4,6%	72,3%		

Appendix 11. Identified Regulation on work experience

Item	Work experience	not at all / very little / a little	moderately	Strongly / very strongly / completely	Chi-Square	P-value
Because I personally consider it important to put efforts in this job	until 10 years	19,8%	12,4%	67,8%	5,936	0,05
	more than 10 years	16,8%	5,5%	77,7%		
Because putting efforts in this job aligns with my personal values	until 10 years	37,2%	11,6%	51,2%	6,349	0,05
	more than 10 years	25,8%	8,9%	65,3%		
Because putting efforts in this job has personal significance to me	until 10 years	31,4%	15,7%	52,9%	8,388	0,01
	more than 10 years	23,3%	8,4%	68,3%		

Appendix 12. Intrinsic motivation on age groups

Item	Age	not at all / very little / a little	moderately	Strongly / very strongly / completely	Chi-Square	P-value
Because I have fun doing my job	20-34	27%	14,8%	58,2%	13,197	0,01
	35-45	17,9%	14,1%	68%		
	46-59	13,1%	7,7%	79,2%		
Because what I do in my work is exciting	20-34	36,5%	17,4%	46,1%	15,382	0,01
	35-45	24,4%	7,7%	67,9%		
	46-59	23,1%	6,9%	70%		
Because the work I do is interesting	20-34	27,8%	5,2%	67%	12,408	0,01
	35-45	21,8%	16,7%	61,5%		
	46-59	14,6%	10,8%	74,6%		

Appendix 13. Intrinsic motivation on work experience

Item	Work experience	not at all / very little / a little	moderately	Strongly / very strongly / completely	Chi-Square	P-value
Because I have fun doing my job	until 10 years	22,3%	15,7%	62%	4,926	0,10
	more than 10 years	17,3%	9,4%	73,3%		
Because what I do in my work is exciting	until 10 years	32,2%	15,7%	52,1%	6,061	0,05
	more than 10 years	26,2%	8,9%	64,9%		
Because the work I do is interesting	until 10 years	25,6%	7,4%	67%	3,469	0,10
	more than 10 years	18,3%	11,9%	69,8%		

Appendix 14. Amotivation on age groups

Item	Age	not at all / very little / a little	moderately	Strongly / very strongly / completely	Chi-Square	P-value
I don't, because I really feel that I'm wasting my time at work	20-34	80,9%	5,2%	13,9%	5,136	0,10
	35-45	82,1%	3,8%	14,1%		
	46-59	88,5%	5,4%	6,1%		
I do little because I don't think this work is worth putting efforts into	20-34	60,9%	13%	26,1%	2,073	0,90
	35-45	68%	9%	23%		
	46-59	64,6%	8,5%	26,9%		
I don't know why I'm doing this job, it's pointless work	20-34	86,9%	3,5%	9,6%	2,991	0,90
	35-45	84,6%	2,6%	12,8%		
	46-59	87,7%	5,4%	6,9%		

Appendix 15. Amotivation on work experience

Item	Work experience	not at all / very little / a little	moderately	Strongly / very strongly / completely	Chi-Square	P-value
I don't, because I really feel that I'm wasting my time at work	until 10 years	80,2%	5,8%	14%	2,490	0,10
	more than 10 years	86,6%	4,5%	8,9%		
I do little because I don't think this work is worth putting efforts into	until 10 years	61,2%	13,2%	25,6%	1,971	0,90
	more than 10 years	65,8%	8,4%	25,8%		
I don't know why I'm doing this job, it's pointless work	until 10 years	86,8%	4,1%	9,1%	0,014	0,99
	more than 10 years	86,6%	4%	9,4%		