Original Research

The Association between Caring Behavior, Self-Efficacy, and Work Engagement among Formal Caregivers Serving Children with Intellectual Disability

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Abstract

Background: Not only caring behavior in caregivers of children with intellectual disability assumes great significance but it also pertains to improved caring quality. On the account that caring behavior can be influenced by self-efficacy and work engagement; consequently, this study was conducted aiming to determine the association between caring behavior, self-efficacy, and work engagement among formal caregivers serving children with intellectual disability in rehabilitation centers of Tehran in 2020.

Method: A descriptive-correlational survey, this study consisted of 203 formal caregivers serving children with intellectual disability from rehabilitation centers. A demographic characteristics questionnaire, the Caring Dimensions Inventory (CDI), the General Self-Efficacy Scale (GSE-10), and Utrecht Work Engagement Scale (UWES) were the tools utilized to collect the data. Data analysis was accomplished using SPSS software version 16 in two descriptive and inferential statistics phases.

Results: The general results indicated that caring behavior significantly and positively correlated with self-efficacy; i.e. as self-efficacy rises, so does the caring behavior (P=0.014). Furthermore, work engagement was found to be significant as shown by the regression model (p=0.001), considering that the coefficient of the model was 0.42. In other words, enhanced work engagement was tantamount to higher caring behavior by 0.42%.

Conclusion: As self-efficacy and work engagement do increase, so do the caring behaviors in caregivers. These results can offer the knowledge base to healthcare policymakers, particularly managers of rehabilitation centers, to embrace well-written programs, in-service training and enhance the working conditions. As a result, the basis for revising the official caregivers' behaviors would be hopefully provided.

Keywords: Caring Behaviors, Self-Efficacy, Work Engagement, Children with intellectual disability, Official Caregivers

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Introduction

Giving care is actually the most influential and primary obligation in the nursing profession (1). The concept of care occupies a special position in the nursing profession and is regarded as the principal element of nursing by prominent nursing theorists such as Watson and Lininger (2). In actuality, care comprises fulfilling clients' physical, psychological, social, and spiritual needs with both technical and emotional dimensions (3, 4). Caring behavior in nurses correlates with client rehabilitation, high levels of client satisfaction, and improved quality of care (5). Brenner et al (2010) noted nurses' caring behaviors ought to be enhanced and to do so, they should be aware of two things: the kind of caring behavior they should maintain and the reasons why their clients and their families perceive a behavior as caring or non-caring (6). In this regard, Zahroh et al (2020) stated despite huge efforts made to improve caregivers' caring behaviors, they still exhibit many disfavored caring behaviors (7). Clients with intellectual disability require greater amounts of care and treatment compared to their peers. Additionally, given their lack of self-help as well as insufficient connections, improper expression of emotions, and challenging behaviors, do not usually obtain good-quality care (8). According to the World Health Organization (WHO), 10% of the world's population suffers from a mental disability (9). This number in Iran alone is nearly 1200 thousand individuals, with an increasing prevalence (10). Frequently held misconceptions about clients with intellectual disability in the community prompt caregivers to either deny them or only focus on financial issues when offering care with the assumption that clients with intellectual disability are incurable (11, 12).Glasper et al. (2017) conducted a study in rehabilitation centers for children with intellectual disability in the UK, showing that they receive poor-standard care and that their caregivers are more prone to violence, stress, and job exhaustion than caregivers in other units are (13). Regardless of the results obtained by such studies, some

researchers have highlighted positive experiences from serving children with intellectual disability, such as caregivers' inner satisfaction with their duties, satisfying the clients, preserving the client's human dignity, client care responsibility, affectionate behaviors, and increased self-esteem. Therefore, the favorable aspects of caring for children with intellectual disability can have a positive impact on caregivers' overall well-being (14). Self-efficacy is among the functional concepts linked to professional behavior and greatly influences the factors concerning nursing performance. The reason is that a high level of self-efficacy raises the quality of care and eventually improves individual and organizational performance (15). Self-efficacy refers to an individual's belief in his or her capacity to execute behaviors necessary to produce specific performance attainments in the organization. It is associated with the degree of one's motivation, and behavior, interacting with them, functioning as a protective factor in the workplace (1, 16). Nurses' self-efficacy is associated with professional independence and empowerment; i.e. those with high levels of self-efficacy, see barriers as an opportunity to progress and overcome them, rather than escape crises, and see them as threats (17). Research has also exhibited that nurses with higher self-efficacy provide quality care behavior to clients, have a better work commitment, and have more endurance in the face of problems (18). Nurses who provide care to children with intellectual disability undergo more stress, higher level of exhaustion, and burnout than other nurses do, as they are likely prone to violence, aggression, and challenging behaviors that might affect their self-efficacy and their quality of care (19). West et al. (2014) discovered that 83% of nurses, who serve mentally ill people, encountered physical harm from their clients (20). Although the quality of care is very important, in spite of the fact that there are many nurses with adequate scientific knowledge, they lack acceptable selfefficacy in clinical environments. Today, given that the principles of childcare have become well

defined and public awareness of quality care services has improved, institutions not only require nurses that possess greater self-efficacy but they also need to boost their human resources (7). Work engagement among healthcare staff is a strategic instrument to enhance the quality of care, as nurses with higher work engagement tend to influence their job performance significantly. The reason is the full dedication of their physical, cognitive, and emotional resources to what they do (21). Consequently, work engagement, another meaningful as consequential factor, determines the caregivers' behavior. Work engagement is a person's emotional and psychological preoccupation with his job, which can satisfy his/her current needs and make him/her proud. Work engagement is the opposite of job stress, tension, and burnout. Nurses, who are highly committed to their job, are self-compassionate, perform their duties to the best of their ability, and are intrigued by their job (22, 23). De Los Santos and Labrague (2021), citing Schaufeli et al. (2006), stated that work engagement is associated with a sense of passion, self-efficacy, professional commitment, and that employees with higher work engagement are more outcome-oriented, productive, and are involved in achieving organizational goals (5). Work engagement leads to better performance in nurses and thus helps the organization achieve its goals (24). Fasoli (2010) reported that the rate of work engagement in nurses is 18% and that it needs to be improved (25). Likewise, Ignatenko (2015) emphasized on the urgent need for improvements in medical centers work engagement (26). Considering nurses' prominent role safeguarding the rights of the clients with intellectual disability, attending to their needs, and physical, emotional, social, and mental well-being (27), this study was conducted aiming to assess the relationship between caring behavior, selfefficacy and work engagement among official caregivers serving children with intellectual disability in rehabilitation centers of Tehran.

Method

is a cross-sectional study involving rehabilitation centers located in Tehran (Noyan Rehab. Centre, Bana Charity, Bachehaye Aseman Institute, Farkhonde Rehab. Center, Yavaran Rehabilitation Charity, Rofaydeh Center, Bachehayeh Amal Rehab). The research statistical population included both professional and nonprofessional nurses serving clients with intellectual disability; educable children aged 6-12 years old. Sampling was conducted continuously and individuals were selected based on inclusion criteria. The inclusion criteria were: at least six months of experience working with children with intellectual disability in Rehab. Centers and lack of any non-chronic or severe illness or mental disorder based on self-reports. In addition, the exclusion criteria were reluctance to participate in the study and having a disabled family member. To determine the sample size with 95% confidence level and 80% test power and considering that the correlation coefficient between caring behavior, self-efficacy and work engagement among official caregivers is 0.2, and that the relationship between the two variables is also statistically significant, a research population of 200 subjects was established using the following formula:

After the code of ethics was obtained (IR.TUMS.FNM.REC.1400.007), a letter of introduction delivered the research environments, and the informed written consent acquired, assuring the confidentiality of their data, the sampling procedure was accomplished according to the inclusion criteria. It ended in the selection of 203 children with intellectual disability from different centers (55, 32, 15, 42, 22, and 37 children from Noyan Rehab. Centre, Bana Charity, Bachehaye Aseman Institute, Farkhonde Rehab. Center, Yavaran Charity, Rofaydeh Rehabilitation Center, and Bachehayeh Amal Rehab, respectively). Likewise, there were also 6, 43, and 154 head nurses, official nurses, and practical nurses, respectively. Due to the prevalence of the Covid-19 pandemic, the

questionnaires were designed as a link and provided to individuals through WhatsApp and Telegram software. After data collection, the data were analyzed using SPSS software version 16 in two descriptive and inferential statistics phases. The former employed the Pearson correlation coefficient to examine the correlation between research variables.

Data Collection tools:

Demographics Characteristics Questionnaire:

This questionnaire determined participants' age, gender, marital status, education, and clinical work experience.

The Caring Dimensions Inventory (CDI):

Devised and psychoanalyzed by Watson and Lea (1997), CDI is a 25-item scale that evaluates nurses' caring behaviors in various dimensions, i.e. physical-technical behavior (11 items), inappropriate behavior (2 items), psychosocial behavior (10 items), professional behavior (1 item), and unwarranted behavior (1 item). CDI is measured on a 5-point Likert scale (strongly disagree = 1 to strongly agree = 5). For two items regarding the inappropriate behavior (items 3 and 16), the scoring is the opposite of the other items, (strongly disagree = 5, and strongly agree = 1). The scoring ranges from 25 (minimum score) to 125 (maximum score), that is, higher scores are indicative of more important caring behavior and lower scores denote less important caring behavior from the nurses' perspective. The reliability of CDI was measured using Cronbach's alpha method as 0.91 (28). Akansel et al. (2021) reported a Cronbach's alpha of 0.91 (29) and Salimi et al. (2012) confirmed the construct validity of CDI in the Iranian sample through factor analysis (30).

General Self-Efficacy Scale (GSE):

The GSE was first developed by Schwarzer and Jerusalem in 1979 as a 20-item scale with two subscales of general self-efficacy and social self-efficacy. It was later revised in 1981 to a single-factor scale including 10 four-option items called GSE -10. GSE was scored based on a 4-point Likert scale (from 1 to 4) with the minimum and

maximum scores being 10 and 40, respectively (31). Scores 10-20, 20-30, and 30-40 denote low self-efficacy, moderate self-efficacy, and high self-efficacy, respectively (32). The reliability of GSE was reported to range from 0.76 to 0.90 (31). Dadipour et al. (2021) calculated the reliability of this questionnaire using Cronbach's alpha and obtained 0.78 (32). Delavar et al. (2013) also examined the validity of GSE in the Iranian population, considering it as good and acceptable and obtained a Cronbach's alpha coefficient of 0.85 (33).

Utrecht Work Engagement Scale (UWES)

Developed in 2003 by Schaufeli and Bakker, UWES is a 17-item scale, which later, as a result of their studies on14.521 people from 10 different countries, it was changed into a 9-item, shortened version of the Utrecht work engagement scale. To calculate the overall score of the scale, the scores for each item are added together. A higher overall score represents greater work engagement, whereas a lower score denotes lower work engagement. The reliability of the scale was 0.813 as obtained by Cronbach's alpha coefficient (34). The content and criteria validity of the scale was confirmed by Ghanbari et al. (2015) as good and acceptable in the Iranian sample. Likewise, the reliability of UWES ranged from 0.63 to 0.70 by Cronbach's alpha coefficient (35).

In the present study, the validity of the instruments was evaluated and approved by ten faculty members of the School of Nursing and Midwifery, Tehran University of medical science. The reliability coefficients for caring behavior, self-efficacy, and work engagement were 0.883, 0.887, and 0.872, respectively.

Results

This study was conducted on 203 official caregivers serving children with intellectual disability. The results indicated that most of the caregivers were female (73.9%), single (42.3%), and held diploma degrees (67.5%), and that the mean age of participants was 32.16 ± 6.42 with a minimum of 23 and a maximum of 51 years. According to their job description, most of them

worked in rotating shifts (36%), were practical nurses (75.9%), and had (31%) 5 to 10 years of clinical work experience (average 7.3 47 ± 5.47 years). Likewise, it was found that roughly half of the participants (50.7%) worked on contract, and most had no second job (81.3%) (Table 1).

As shown in Table 2, the mean scores of caring behavior, self-efficacy, and work engagement were 100.01- \pm 11.66, 29.69 ± 5.63 , and $33.37 \pm$ 6.78, respectively. Caring behaviors had the highest and lowest mean scores, i.e. 4.44 ± 0.83 and 2.78 ± 0.85 , with regard to professional behaviors and inappropriate behaviors variables, respectively. The self-efficacy in 75.4% of caregivers was high; the work engagement had the highest, and the lowest mean scores, i.e. 11.38 ± 2.61 and 10.68 ± 2.45 with regard to dedication and absorption variables, respectively.

Regarding items analysis, the highest and lowest mean scores in caring behavior belonged to item 23, i.e. "patient privacy" (4.48 ± 0.76) , and item 3, i.e. "intimacy" (2.01 ± 0.89) , respectively (Table 3). The highest and lowest mean scores in self-efficacy were related to item 1, "I can always manage to solve difficult problems if I work hard." (3.11 ± 0.81) , and item 3 "My skills help me manage unpredictable situations." (2.96 ± 0.76) , respectively, (Table 4). Additionally, as regards the work engagement, the highest and the lowest mean scores belonged to item 3, i.e. "I am very interested in my job." (3.95 ± 0.98) , and item 9, i.e. "When I work, I act beyond imagination" (3.11 ± 0.81) , respectively (Table 5).

Table 6 illustrates the correlations between caring behavior, self-efficacy, and work engagement. Findings indicate that caring behavior has a statistically significant and positive correlation with self-efficacy in terms of physical-technical behaviors (p = 0.002) and psychosocial behaviors (p = 0.003). Thus, as caring behaviors increases in these two components, so does self-efficacy. Furthermore, it was discovered that inappropriate nursing behaviors and self-efficacy correlate significantly and negatively (p < 0.001), i.e. increases in inappropriate nursing behaviors lead

to reduced self-efficacy. Work engagement and all its components had a statistically significant and positive correlation with physical-technical, psychosocial, and unnecessary behaviors (except vigor) (P < 0.001). Furthermore, work engagement had a statistically significant and negative correlation with inappropriate nursing behaviors (P < 0.001), suggesting that increased work engagement leads to lower inappropriate behaviors.

The results obtained from multiple linear regression on self-efficacy, work engagement, and caring behavior in official caregivers serving children with intellectual disability revealed that work engagement was significant in the regression model (p = 0.001) with a coefficient of 0.42; in other words, for each unit of increase in work engagement, caring behavior also improved by 0.42 (Table 7).

According to Table 8, caring behavior and selfstatistically efficacy had no significant relationship with any of the personal attributes while work engagement had a statistically significant relationship only with marital status (p = 0.023), i.e. work engagement was significantly higher in married nurses than the widow nurses (p = 0.02). Caring behavior had also a statistically significant relationship with clinical work experience (p <0.001) and rehabilitation work experience (p = 0.002). For nurses with more than ten years of experience, it was significantly less than those with one to three years of work experience (p <0.001), three to five years (p = 0.009), and five to ten years (p < 0.001) of working experience. However, the difference was not significant in other cases. Self-efficacy was significantly associated with working shifts (p <0.001), employment status (p = 0.004), second job (p = 0.004), and clinical work experience (p =0.001). For nurses working the evening shift, it was significantly higher than those working on irregular shifts (p <0.001) and regular rotation (p = 0.006). Likewise, self-efficacy was higher in nurses working the morning shift than in irregular rotation (p = 0.001). It was also found that selfefficacy was significantly higher in nurses with contract employment than in those passing compulsory service (p = 0.012). Meanwhile, this difference was not significant in other cases. For people with no second job, self-efficacy was higher, and for people with 5 to 10 years of work experience, it was significantly higher than for people with more than ten years of work experience (p = 0.007) and 1 to 3 years (0.001).

Discussion

This study was carried out aiming to investigate the relationship between caring behavior, selfefficacy, and work engagement in official caregivers serving children with intellectual disability. The findings indicated that the mean score of caring behavior is 100.01 ± 11.66, suggesting a high level of caring behavior among the caregivers. Barzajhe et al. (2015) reported a moderate level of caring behavior for familybased caregivers serving children with intellectual disability using the researcher's self-made questionnaire. The level of caring behavior improved upon educational intervention (36), implying that caring behavior enhances if training or education is provided. The preliminary results obtained by Barzajhe et al. (2015) disagree with ours, which can be explained by mothers' dissimilar attitudes and behaviors (as nonprofessional caregivers) towards nurses (as official caregivers). Hossainzadeh et al. (2019) also reported that nurses' caring behaviors were optimal and that the physical aspects of care are more important to nurses than the psychosocial dimension (37). The results of this study comply with the current study. Nevertheless, as regards caring behavior aspects, the results inconsistent because they showed that caring behavior in professional nursing behavior is more important than other components and that the psychosocial aspects of caring behavior were slightly more significant than the physicaltechnical aspect.

Salmani et al. (2014) aimed to examine how mothers of hospitalized children perceive nurses' caring behaviors, then suggesting that multiple factors determine parents' perceptions of nurses' behaviors, including accountability, commitment, prioritization, punctuality, skills, and expertise (38). It was also found that nurses' comforting presence, attentive behavior, responsiveness, and prioritizing child care needs during caring behaviors are very important for mothers, collectively referred to as "assurance behavior" (39). In general, various studies conducted in this field indicate acceptable levels of caring behavior among nurses, yet it is important to pay more attention to the psychological dimension of caring behaviors, on which the educational authorities of universities and hospitals as well as rehabilitation centers should focus more. Thus, nurses should not rely solely on physical aspects in providing their care to these people.

The self-efficacy of most caregivers (75.4%) was at a high level (29.69± 5.63) in our study. Bahrami et al. (2016) conducted a study on pediatric nurses, reporting a high level of caring self-efficacy (40). Barani et al. (2019) stated that self-efficacy was acceptable (high) in more than half of the studied units (41). Ravanipour et al. (2015) showed that nurses enjoyed satisfactory levels of self-efficacy (42). Handiyani et al (2019) also reported that the participants' level of self-efficacy was acceptable (43), whereas Salimi et al. (2017) showed that the level of self-efficacy in the studied samples was moderate (44), which is disagreeing with our results that can be explained by the differences between the studied samples. Self-efficacy, directly and indirectly, affects people's behaviors; in fact, studying self-efficacy in many areas of health promotion shows that the perception of self-efficacy is effective in disease management and behavior control (15).

The mean score for work engagement (33.37 ± 6.78) was at a medium to a high level. De Los Santos et al (2021) (45), Mehrizi et al. (2019) (46), Keshtkaran et al. (2012) (47), and Haghighi et al. (2012) (48) reported a moderate level of work engagement among their participants, that were in line with the results of this study. However,

Soodani et al. (2016) (49) and Lee et al (2019) (50) stated low levels of work engagement that are inconsistent with the results of our study. In this regard, it can be pointed out that there are diverse factors that generate motivation and work engagement in employees like job independence, job opportunities, and social support (46). According to studies, the dimension of organizational justice is able to predict changes in work engagement among nurses, so it can be said that injustices and pressures in the workplace can lead to decreased organizational and work engagement (49).

Findings showed a statistically significant, positive correlation between caring behavior and self-efficacy; that is, as self-efficacy increases, so do caring behaviors (p = 0.014). Work engagement was also shown to be significant in the regression model (p = 0.001), and the model's coefficient was 0.42. In this regard, Zahroh et al (2020) found a statistically significant relationship between self-efficacy and nursing care behavior (7), and Yimsai et al (2016) also reported a positive and significant relationship between selfefficacy and caring behaviors (51). Barani et al. (2019) discovered a positive and significant correlation between mothers' self-efficacy and caring behavior (41). The results of all these studies were consistent with the result of the present study. Yet, with regard to inconsistent studies, we can refer to Dharmanegara et al (2015) who showed that self-efficacy does not have a significant effect on caring behavior. This finding can be explained by the fact that care and caring behaviors are not always influenced by attitudes and behavioral mechanisms such as self-efficacy (52).

Work engagement and all its dimensions (except absorption) had a statistically significant and positive correlation with caring behavior. De Los Santos et al (2021) also showed a statistically significant relationship between work absorption, job satisfaction, work engagement, and caring behaviors in nurses (45). The results by Mokodongan et al (2021) showed that work

engagement has a significant positive effect on nurses' caring behavior (53); moreover, Van Bogaert et al (2014) displayed that work absorption and other aspects of nurses' work environment such as workload and social capital are predictors of job outcome and the quality of nursing care. They can predict 60% of job outcomes and 47% of the quality of nursing care (54). Although these studies were performed in different research communities and environments, their results were almost consistent with those of this study.

According to the findings, self-efficacy and caring behavior were not significantly related to any of the demographic characteristics. Additionally, work engagement had a statistically significant relationship only with marital status (p = 0.023). regarding the relationship between demographic variables and nurses' caring behavior. Hosseinzadeh et al. (2019) showed that there was a statistically significant relationship between nurses' caring behaviors and gender such that the mean score of caring behavior in women was reported to be higher than that in men (p = 0.001)(37). Ghazawy et al (2021) indicated that work engagement had no statistically significant connection with any of the demographic variables in nurses (21). These results are inconsistent with the results of our study; however, Bahrami et al. (2016) reported that self-efficacy was not statistically significant in any of the demographic variables (40), which was consistent with this study.

Nursing care consists of professional understanding, knowledge, nursing practice expertise, and nurse-patient interaction (29). It has been regarded as the heart of nursing practices (55). Delivering high-quality care will not be achieved unless a preventive approach is taken by all parties, including the clients with intellectual disability, families, caregivers, and primary health care and specialist services. If all these parties, their plans, and services are smoothly integrated, the provision of high-quality primary care is facilitated (56).

One of the factors determining how well nurses perform is the perception of self-efficacy as it is positively correlated to nurses' performance. People with high levels of self-efficacy, a sense of control, and power believe they can address potential environmental hazards, while those with low self-efficacy are worried, anxious, and upset, often expecting failure in their job, and believe that potential environmental hazards cannot be managed (15). Self-efficacy can strengthen a person's belief in the course of action or behavior being performed and plays an important role in determining what actions will be initiated and performed (52).

Health organizations should execute strategies aimed at increasing job motivation to improve nurses' caring behaviors and ensure client safety (45). Work engagement is also one of the variables, if maintained, delivers positive results for the organization since it improves the individuals' performance (49). There are several factors involved in inducing work engagement in nurses, such as job characteristics, reward, recognition, and support from the organization and supervisors (47).

Limitations: One of the limitations of this study is the self-report nature of the questionnaires as it might have affected the accuracy of the information obtained and could not be solved by the researcher. Consequently, it is recommended that other methods of data collection, e.g. interviews, be employed in forthcoming studies. It is also suggested that comparable studies be conducted in other socio-cultural contexts while including higher sample sizes and care centers. Their results are recommended to be compared with those of this study. Because the results obtained may be distinct in other environments and even ethnicities. Given that the limitations of the Covid-19 epidemic may affect the results, it is recommended that similar studies be performed in post-epidemic conditions.

Conclusion:

Parallel studies conducted in various societies, cultures, and research settings produce consistent and inconsistent results. Meanwhile, most of the aforementioned studies yielded results that were consistent with our study. To justify the consistent and inconsistent results, the role of factors such as different cultural-social contexts, use of dissimilar tools, demographic characteristics and the impact of the Covid-19 epidemic on the occupational, psychological dimensions and caregivers should not be overlooked. Considering the significant correlation between caring behavior, self-efficacy, and work engagement in caregivers serving children with intellectual disability, more attention should be focused on their self-efficacy and work engagement, even on family caregivers or practical nurses. It can help achieve the goal of improving care behaviors and the quality of care for children with intellectual disability. To do so, policymakers as well as educational managers of rehabilitation centers and hospitals can enforce educational programs in the form of in-service and virtual classes, books, multimedia training, pamphlets, etc. Likewise, focusing on the findings of this study as basic science allows us to take measures to enhance the care provided to children with intellectual disability.

References:

- 1. Cho H, Han K. Associations among nursing work environment and health-promoting behaviors of nurses and nursing performance quality: A multilevel modeling approach. Journal of Nursing Scholarship. 2018;50(4):403-10.
- 2. Green HE. Use of theoretical and conceptual frameworks in qualitative research. Nurse researcher. 2014;21(6).
- 3. Mahmoodzadeh Z, Ashktorab T, Naeeni SMK. The correlation between Moral Distress and Caring Behaviors of Nurses in Intensive Care Units of Bandar Abbas Hospitals in 2018 Medical Ethics and History of Medicine. 2019;12(1):82-93.
- 4. Bramley L, Matiti M. How does it really feel to be in my shoes? Patients' experiences of compassion within nursing care and their

- perceptions of developing compassionate nurses. Journal of clinical nursing. 2014;23(19-20):2790-9.
- 5. De Los Santos JA, Labrague L. Job Engagement and Satisfaction are Associated with Nurse Caring Behaviours: A Crosssectional Study. Journal of nursing management. 2021:1-9.
- Brenner ZR, Dimitroff LJ, Nichols LW. Documentation of nurse caring behaviors. International Journal for Human Caring. 2010;14(4):7.
- 7. Zahroh R, Qomariah SN, Ningsih SU, Bakar A. Self-Efficacy Associated with Nurse Caring Behavior in Nursing Services in Private Hospitals. International Journal of Psychosocial Rehabilitation. 2020; 24(09).
- 8. Lewis P, Gaffney RJ, Wilson NJ. A narrative review of acute care nurses' experiences nursing patients with intellectual disability: underprepared, communication barriers and ambiguity about the role of caregivers. Journal of Clinical Nursing. 2017;26(11-12):1473-84.
- 9. Ghadampour, Sepahvandi, Beyranvandi. The effectiveness of puppet show on the behavioral disorders Educable mentally retarded boy students. Journal of Exceptional Children. 2018;18(3):91-104.
- 10. Alizadeh H. The Renaming Of Mental Retardation To Intellectual Disability. Journal Of Exceptional Children. 2008;8(2 (28)):127-40.
- Ravees S, Chowhan A. Misinterpretation of Mental Retardation Disability by Caregivers in Jammu Region of India. International Journal of Scientific and Research Publications,. 2019;9(7).
- 12. Enoch A, Mprah WK, Owusu I, Bediako J. Role of Caregivers of Children with Intellectual Disabilities and Support Systems Available to them in Ghana. Disability, CBR & Inclusive Development. 2017;28(4):80-95.
- 13. Dr. Edward Alan Glasper Editor-in-

- chief (2017) Optimising the Care of Children with Intellectual Disabilities in Hospital, Comprehensive Child and Adolescent Nursing, 40:2, 63-67
- 14. Ndirangu E, Midigo R. Understanding the lived experiences Caregiving for Children Living with Disabilities in Mukuru Slums, Kenya; Implications for Health and Wellness in Caregiving. International Journal of Health and Biological Sciences. 2019;2(1):24-31.
- Bahrami M, Alavi A, Zargham-Boroujeni A. Caring Self-Efficacy Perception In Pediatric Wards Nurses Iran Journal of Nursing. 2018;31(112):67-76.
- 16. Mehrangiz Ghabimi, Fatemeh Mahdavipour, Maryam Zarei, Razive Maryam Mazroei, Kamali, Aminreza Askarpour, Hamid hojjati. The Effect of Implementing Pain Control Guidelines on the Pain of Patients Admitted to the Intensive Care Unit. Journal of Pharmaceutical Negative Results .2022. 13(7): 344-348
- 17. Soudagar S, Rambod M, Beheshtipour NJIjon, research m. Factors associated with nurses' self-efficacy in clinical setting in Iran, 2013. 2015;20(2):226. PMID: 25878701, PMCID: PMC4387648.
- 18. Fida R, Laschinger HKS, Leiter MP. The protective role of self-efficacy against workplace incivility and burnout in nursing: A time-lagged study. Health care management review. 2018;43(1):21-9.
- 19. Conradie M, Erwee D, Visser M, Calitz FJ, Joubert G, Serfontein I. A profile of perceived stress factors among nursing staff working with intellectually disabled inpatients at the Free State Psychiatric Complex, South Africa. Curationis. 2017 Apr 3; 40(1):1-8
- 20. West CA, Galloway E, Niemeier MT. Resident aggression toward staff at a center for the developmentally disabled. Workplace health & safety. 2014;62(1):19-

26.

- 21. Ghazawy ER, Mahfouz EM, Mohammed ES, Refaei SA. Nurses' work engagement and its impact on the job outcomes. International Journal of Healthcare Management. 2021;14(2):320-7.
- 22. Guerrero-Barona E, Rodríguez-Jiménez M, Chambel MJ. Engagement in carers of persons with intellectual disabilities: the role of self-efficacy and emotional intelligence. Disability and rehabilitation. 2020;42(10):1397-405.
- 23. Valipour Eskandarkolaii E, Hekmatipour N, Hojjati H. The Effect of Spiritual Self-Care Training on the Severity of Insomnia of Diabetic Adolescents. cmja 2023; 13 (1):28-35
- 24. Van Bogaert P, Wouters K, Willems R, Mondelaers M, Clarke S. Work engagement supports nurse workforce stability and quality of care: nursing team-level analysis in psychiatric hospitals. Journal of Psychiatric and Mental Health Nursing. 2013;20(8):679-86.
 - https://doi.org/10.1111/jpm.12004
- 25. Fasoli DR. The culture of nursing engagement: A historical perspective. Nursing Administration Quarterly. 2010;34(1):18-29. doi: 10.1097/NAQ.0b013e3181c95e7a
- 26. Ignatenko V. Psychologists working in state psychiatric hospitals: An exploration of factors related to work engagement: West Virginia University 2015.
- 27. Home A. ANA Position Statement: Nurse's Role in Providing Ethically and Developmentally Appropriate Care to People With Intellectual and Developmental Disabilities. OJIN: The Online Journal of Issues in Nursing.26 (1). https://doi.org/10.3912/OJIN.Vol26No01P oSCol01
- 28. Watson R, Lea A. The caring dimensions inventory (CDI): content validity, reliability and scaling. Journal of

- Advanced Nursing. 1997;25(1):87-94. https://doi.org/10.1046/j.1365-2648.1997.1997025087.x
- 29. Akansel N, Watson R, Vatansever N, Özdemir A. Nurses' perceptions of caring activities in nursing. Nursing Open. 2021;8:506–516. https://doi.org/10.1002/nop2.653
- 30. Salimi S, Azimpour A, Fesharaki M, Mohammadzadeh S. Nurses' Perception Of Importance Of Caring Behaviors And Its Determinant Factors Nursing and Midwifery Journal. 2012;10(1):1-12.
- 31. Schwarzer, R., & Jerusalem, M. (1995). Generalized self-efficacy scale. In S.Wright, & M. Johnston, & J. Weinman, (Eds.), Measures in Health Psychology: A User's Portfolio. Causal and Control Beliefs (pp. 35–37). Windsor, UK: nferNelson
- 32. Dadipoor S, Alavi A, Ghaffari M, Safari-Moradabadi A. Association between self-efficacy and general health: a cross-sectional study of the nursing population. BMC Nursing. 2021;20(1):49. https://doi.org/10.1186/s12912-021-00568-5
- 33. Delavar A, Najafi M. The psychometric properties of the general self efficacy scale among university staff. Quarterly of Educational Measurement. 2013;3(12):87-104.
- 34. Schaufeli WB, Bakker AB, Salanova M. The measurement of work engagement with a short questionnaire: A cross-national study. Educational psychological measurement. 2006;66(4):701-16. https://doi.org/10.1177/0013164405282471
- 35. Ghanbari s, ardalan m, zandi k, saifpanahi h. Validity and Reliability of Utrecht Nine-item Work Engagement Scale (UWES-9) %J Journal of Management and Development Process. 2015;28(2):181-97.
- 36. Barzajhe Atri S, Abdollahi H, Arshadi Bostanabad M, Asghari Jafarabadi M. The effect of educational intervention on the

- attitudes and behaviors of family caregivers caring for children with intellectual disability. Journal of Nursing Education. 2015;3(4):1-10.
- 37. Hosseinzadeh H, Mohammadi M, Shamshiri M. The Study of Caring Behaviors and Its Determinant Factors from the Perspective of Nurses in Educational Hospitals of Ardabil %J Journal of Health and Care. 2019;21(3):203-11. Doi: 10.29252/jhc.21.3.203
- 38. Salmani N, Abbaszadeh A, Rassouli M. Hospitalized Children's Mothers' Perceptions Of Nursing Care Behaviors Iranian Journal Of Nursing Research 2014;9(2 (33)):28-37
- 39. Salmani N, Hasanvand S, Bagheri I, Mandegari Z. 1Nursing Care Behaviors Perceived by Parents of Hospitalized Children: A Qualitative Study Int J Pediatr. 2017;5(7).
- 40. Bahrami M, Alavi A, Zargham-Boroujeni A. Perceived Self-Efficacy In Pediatric Nurses Of Proficiency Concept: A Qualitative Study Nursing and Midwifery Journal 2016;14(3):254-62.
- 41. Barani M, Hassani L, Ghanbarnejad A, Molavi MA. Relationship between self-efficacy and caring behavior of mothers of children with cancer %J Journal of Preventive Medicine. 2019;6(1):35-26. Doi: 10.29252/jpm.6.1.35
- 42. Ravanipour M, Ahmadian A, Yazdanpanah A, Soltanian AR. Assessing the relationship between self-efficacy and clinical decision-making in hospital nurse. Avicenna Journal of Nursing and Midwifery Care. 2015;23(4):77-86.
- 43. Handiyani H, Kusumawati AS, Karmila R, Wagiono A, Silowati T, Lusiyana A, et al. Nurses' self-efficacy in Indonesia. Enfermeria clinica. 2019;29:252-6. https://doi.org/10.1016/j.enfcli.2019.04.030
- 44. Salimi HR, Pourebrahimi M, Hoseinabadi Farahani MJ. Clinical Self-

- Efficacy, Dimensions And Related Factors Among Nursing Students Iranian Journal Of Psychiatric Nursing 2017;5(2):1-7. Doi: 10.21859/ijpn-05021
- 45. Golfiroozi S, Hojjati H, Ranjbar Noei F, Kaboosi M, Shikhnejad F, et al. The Effectiveness of In-service Training Course on Adult Cardiopulmonary Resuscitation based on the Kirkpatrick Model. J Health Rep Technol. 2023;9(3):e137933. https://doi.org/10.5812/jhrt-137933.M
- 46. ehrizi Z, Nasiri A, Irandoost S. The Work Engagement of Nurses and Its Correlation with Perceived Social Support %J Iran Journal of Nursing. 2019;32(120):60-70. Doi: 10.29252/ijn.32.120.60
- 47. Mazroei R, Monemi Gohari E, Ghadermazi M, Latifi N, Hojjati H, et al. The Effect of Home-Based Pulmonary Rehabilitation on Asthmatic Pediatric Quality of Life. J Health Rep Technol. 2023;9(3):e137577. https://doi.org/10.5812/jhrt-137577.
- 48. Haghighi A, Haghighi S, Samavatian H, Amini M, Abasi Hafshejani M. Predicting Job Involvement through Positive Affect and Emotional Quotient among Midwives and Nurses. The Iranian Journal of Obstetrics, Gynecology and Infertility. 2012;15(30):22-8. Doi: 10.22038/IJOGI.2012.70
- Soodani M, Mostafavirad F, Chinaveh 49. M. Assessing the simple and multiple relationships between individual and organizational variables and job involvement among nurses %J Quarterly Journal of Nersing Management. 2016;4(3):42-53.
- 50. Lee A, Kim H, Faulkner M, Gerstenblatt P, Travis DJ, editors. Work engagement among child-care providers: An application of the job demands—resources model. Child & Youth Care Forum; 2019: Springer. https://doi.org/10.1007/s10566-

- 018-9473-y
- Yimsai R, Intanon T, Kongsuwan V. 51. The Relationship between Perceived Caring Self-Efficacy and Caring Behaviors Among Caregivers of Persons with Behavioral and Psychological Symptoms of Dementia. Songklanagarind Journal of Nursing. 2016;36(2):104-17.
- 52. Dharmanegara IBA, Pradesa HA. The influence of self-efficacy and emotional intelligence toward caring behavior among nurses in public hospital Denpasar Bali. **IOSR-JNHS.** 2015;4:9-15. DOI: 10.9790/1959-04230915
- 53. Mokodongan F, HK. Tjahjono Nuryakin N. The effect of work engagement on nursing caring behavior with burnout as intervening variables (study of nurses at Datoe Binangkang Lolak Regional General Hospital). Journal of Management and Business. 2021 Sep 1;20(2):155-63.

- https://doi.org/10.24123/jmb.v20i2.496
- Van Bogaert P, van Heusden D, Timmermans O, Franck E. Nurse work engagement impacts job outcome and nurseassessed quality of care: model testing with nurse practice environment and nurse work characteristics as predictors. Frontiers in psychology. 2014;5:1261. https://doi.org/10.3389/fpsyg.2014.01261
- 55. Ranjbar N, Khedmatgozari Sadeghigolafshanl M, Farhadi S, Hojjati H. The Relationship between Fear of Sleep and Death Anxiety in Veterans of Post-Traumatic Stress Disorder. MCS 2021; 8 (2) :101-108
- Lennox NG, Kerr MP. Primary health 56. and people with an intellectual disability: the evidence base. Journal of Intellectual Disability Research. 1997 Oct;41(5):365-72.

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Table & Figure:

Table 1: Demographic characteristics of caregivers

Personal profile		Mean + standard	Minimum-		
		deviation	maximum		
Age (years)		32.16±6.42	23-51		
Duration of marriage (years)	11.48±8.29	1-41		
		Frequency	percentage		
gender	Female	53	26.1		
	male	150	73.9		
	total	203	100		
education	Diploma	137	67.5		
	A.D	35	17.2		
	Masters	20	9.9		
	M.S.	11	5.4		
	total	203	100		
marital status	Single	86	42.4		
	Married	85	41.9		
	divorced	19	9.4		
	Deceased wife	13	6.4		
	total	203	100		
number of children	0	21	19.6		
	1	32	29.9		
	2	32	29.9		
	3 and more	22	20.6		
	total	107	100		
Occupational profile					
Shift system	Irregular shift	73	36		
•	Regular shift	50	24.6		
	Fixed the night	17	8.4		
	Fixed the afternoon	26	12.8		
	Fixed the morning	37	18.2		
	total	203	100		
type of employment	temporary	103	50.7		
	formal	30	14.8		
	company	44	21.7		
	sectional	15	7.4		
	Pilot	11	5.4		
	Total	203	100		
second job	Yes	38	18.7		
U	No	165	81.3		
	Total	203	100		
Clinical work	Six months to 1 year	19	9.4		
experience (years)	1 to 3 years	45	22.2		
sperience (years)	3 to 5 years	34	16.7		
	5 to 5 years	JT	10.7		

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	5 to 10 years	63	31
	More than 10 years	42	20.7
	Total	203	100
position	Nurse	49	24.1
	Assistant nurse	154	75.9
	Total	203	100
Amount of salary	3million to 4	42	20.7
received	4 million to 6	75	36.9
	6million and more	86	42.4
	Total	203	100

Table 2: Numerical indicators of caring behavior, self-efficacy and job attachment in caregivers

Variable type	Dimensions	Mean + standard deviation	Minimum- maximum		
Caring behavior				Basis on 1 to 5	5
				Mean +	Minimum-
				standard	maximum
				deviation	
	Physical-	44.84±6.04	18-55	4.07±0.54	1.64-5
	technical				
	behaviors				
	Improper	5.56±1.71	2-10	2.78±0.85	1-5
	behaviors				
	Psychosocial	41.17±5.23	20-50	4.11±0.52	2-5
	behaviors				
	Unnecessary	4.01±0.84	1-5	4.01±0.84	1-5
	behaviors				
	Professional	4.41±0.83	1-5	4.41±0.83	1-5
	Behaviors				
	total	100.01±11.66	46-121	4±0.46	1.84-4.84
Self -efficacy				Frequency	percentage
	low			1	0.5
	medium			49	24.1
	high			153	75.4
	total	29.69±5.63	12-40	203	100
Work	Vitality	11.29±2.79	3-15		
engagement	Sacrifice at	11.38±2.61	3-15		
	work				
	Infatuation	10.68±2.45	3-15		
	total	33.37±6.78	9-45		

	aregivers g Behavior	Complete	lv	Dica	gree	I ha	Ve	I agree I agree		Mean		
Caring	6		-	(2)	gree	no io		(4)		com		(SD)
		disagree ((-)			(3)	uca	(-1)		ely (_	(52)
		F	P	F	P	F	P	F	P	F	P	
1	Assisting patients	4	2	5	2.5	34	16.7	105	51.7	55	27.1	(0.84) 4
_	in the activities	-										(0.0.1)
	of daily routine											
2	Writing nursing	1	0.5	13	6.4	33	16.3	96	47.3	60	29.6	(0.87)
2	reports for	_	0.0	10	0.4		10.0		17.5		22.0	3.99
	patients											
3	Compassion for	4	2	9	4.4	30	14.8	102	50.2	58	28.6	(0.89)
3	the patient	-	_				1.00	102	0012			2.01
4	Considering the	2	1	2	1	18	8.9	83	40.9	98	48.3	(0.76)
•	patient as a	_										4.34
	human being											
5	Explain clinical	1	0.5	10	4.9	38	18.7	80	39.4	74	36.5	(0.89)
	procedures to the	_										4.06
	patient before											
	implementation											
6	Wear clean and	2	1	6	3	16	7.9	61	30	118	58.1	(0.83)
U	tidy clothes while	_										4.41
	working in the											
	ward											
7	Sitting and	2	1	14	6.9	33	16.3	85	41.9	69	34	(0.93)
•	talking with the											4.01
	patient											
8	Assessing the	4	2	12	5.9	38	18.7	91	44.8	58	28.6	(0.94)
O	patient's lifestyle											3.92
	as part of the											
	patient's											
	evaluation and											
	cognition											
9	Report the	1	0.5	7	3.4	23	11.3	91	44.8	81	39.9	(0.81)
-	patient's											4.2
	condition to the											
	superior nurse											
10	Do not leave the	2	1	13	6.4	33	16.3	83	40.9	72	35.5	(0.93)
	patient's alone											4.03
	during the											
	invasive											
	procedure											
11	Be honest with	5	2.5	10	4.9	32	15.8	85	41.9	71	35	(0.96)
- -	the patient and											4.02
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	do not lie to											
	him/her		<u>L_</u>		<u>L_</u>						<u> </u>	
12	Coordinating	2	1	10	4.9	32	15.8	98	48.3	61	30	(0.86)
	and organizing											4.01
	counseling and											
	treatment work											
	for the patient											
13	Listen patiently	1	0.5	36	17.7	29	14.3	73	36	64	31.5	(1.08)3.8
	to the patient											
14	Talk to the	3	1.5	6	3	34	16.7	88	43.3	72	35.5	(0.87)4.0
	doctor about the											8
	patient's											
	problems and											
	issues											
15	Explain aspects	2	1	11	5.4	47	23.2	81	39.9	62	30.5	(0.91)3.9
	of self-care to											4
	patients											
16	Sharing personal	74	36.5	45	22.2	27	13.3	34	16.7	23	11.3	(1.41)3.5
	problems with											6
	the patient											
17	Inform the	5	2.5	11	5.4	25	12.3	86	42.4	76	37.4	(0.96)
	patient's											4.07
	relatives of his											
	condition											
18	Carefully	3	1.5	4	2	23	11.3	70	34.5	103	50.7	(0.86)
10	monitor the											4.31
	patient's vital											
	signs											
19	In any case, give	2	1.5	8	3.9	31	15.3	99	48.8	62	30.5	(0.86)
17	priority to											4.03
	meeting the											
	needs of patients											
20	Having the	1	0.5	6	3	41	20.2	80	39.4	75	36.9	(0.85)
	competence and											4.09
	ability to											
	perform clinical											
	procedures											
21	Involving the	2	1	13	6.4	38	18.7	76	37.4	74	36.5	(0.94)
-1	patient in self-	_	-							•		4.02
	care											
22	Assure about the	2	1	7	3.4	38	18.7	97	47.8	59	29.1	(0.84)
44	need for and	_	•	,	3.4		10.7		17.0			4.00
	importance of											
	clinical											
	procedures											
	procedures						<u> </u>					

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23	Patient privacy	1	0.5	3	1.5	19	9.4	55	27.1	125	61.6	(0.76) 4.48
24	Be merry and happy with the	1	0.5	2	1	24	11.8	70	34.5	106	52.2	(0.76) 4.37
25	patient Considering the effects of the	2	1	4	2	34	16.7	67	33	96	47.3	(0.86) 4.24
	drug and its side effects											

Table 4: Frequency distribution, mean and standard deviation of self-efficacy items in caregivers

self	self-efficacy		Not at all true (1)		Hardly true (2)		Moderat ely true (3)		ctly (4)	Mean (SD)
			P	F	P	F	P	F	P	
1	I can always manage to solve difficult problems if I try hard enough.	6	3	38	18.7	87	42.9	72	35.5	(0.81) 3.11
2	If someone opposes me, I can find the means and ways to get what I want.	7	3.4	43	23.2	100	49.3	49	24.1	(0.78) 2.94
3	It is easy for me to stick to my aims and accomplish my goals.	8	3.9	43	21.2	101	49.8	51	25.1	(0.75) 2.96
4	I am confident that I could deal efficiently with unexpected events.	9	4.4	56	27.6	86	42.4	52	25.6	(0.83) 2.89
5	Thanks to my resourcefulness, I know how to handle unforeseen situations.	11	5.4	49	24.1	101	49.8	42	20.7	(0.8) 2.86
6	I can solve most problems if I invest the necessary effort.	6	3	35	17.2	104	51.2	58	28.6	(0.75) 3.05
7	I can remain calm when facing difficulties because I can rely on my coping abilities.	12	5.9	47	23.2	90	44.3	54	26.6	(0.85) 2.92
8	When I am confronted with a problem, I can usually find several solutions	5	2.5	31	15.3	106	52.2	61	30	(0.75)
9	If I am in trouble, I can usually think of a solution.	9	4.4	39	19.2	99	48.8	56	27.6	(0.8) 3.00
1 0	I can usually handle whatever comes my way	8	3.9	56	27.6	92	45.3	47	23.2	(0.8) 2.88

self-efficacy		Not at all true (1)		Hardly true (2)		Moderat ely true (3)		Exactly true (4)		Mean (SD)
1	I can always manage to solve	F	P 3	F 38	18.7	F 87	P 42.9	F 72	P 35.5	(0.81) 3.11
1	difficult problems if I try hard enough.	o l		30	10.7	07	42.9	72	33.3	(0.01) 3.11
2	If someone opposes me, I can find the means and ways to get what I want.	7	3.4	43	23.2	100	49.3	49	24.1	(0.78) 2.94
3	It is easy for me to stick to my aims and accomplish my goals.	8	3.9	43	21.2	101	49.8	51	25.1	(0.75) 2.96
4	I am confident that I could deal efficiently with unexpected events.	9	4.4	56	27.6	86	42.4	52	25.6	(0.83) 2.89
5	Thanks to my resourcefulness, I know how to handle unforeseen situations.	11	5.4	49	24.1	101	49.8	42	20.7	(0.8) 2.86
6	I can solve most problems if I invest the necessary effort.	6	3	35	17.2	104	51.2	58	28.6	(0.75) 3.05
7	I can remain calm when facing difficulties because I can rely on my coping abilities.	12	5.9	47	23.2	90	44.3	54	26.6	(0.85) 2.92
8	When I am confronted with a problem, I can usually find several solutions	5	2.5	31	15.3	106	52.2	61	30	(0.75) 3.1
9	If I am in trouble, I can usually think of a solution.	9	4.4	39	19.2	99	48.8	56	27.6	(0.8) 3.00
1 0	I can usually handle whatever comes my way	8	3.9	56	27.6	92	45.3	47	23.2	(0.8) 2.88

Caring	Self-efficacy	Work engagen	nent		
behavior		vitality	Immersed in	preoccupation	total
			work		
Physical-	r=0.127	r=0.235	r=0.366	r=0.143	r=0.29
technical	P=0.002	P=0.001	P<0.001	P=0.041	P<0.001
behaviors					
Improper	r= -0.325	r= -0.118	r= -0.085	r= -0.114	r= -0.123
behaviors	p<0.001	P=0.094	P=0.23	P=0.105	P<0.001
Psychosocial	r=0.208	r=0.211	r=0.344	r=0.149	r=0.274
behaviors	P=0.003	P=0.003	P<0.001	P=0.033	P<0.001
Unnecessary	r=0.114	r=0.115	r=0.273	r=0.171	r=0.215
behaviors	P=0.105	P=0.102	P<0.001	P=0.015	P=0.002
Professional	r=0.085	r=0.077	r=0.121	r= -0.007	r=0.076
Behaviors	P=0.226	P=0.226	P=0.081	P=0.92	P=0.279
total	r=0.172	r=0.212	r=0.359	r=0.136	r=0.275
	P=0.014	P=0.002	P<0.001	P=0.053	P<0.001

Table 7: Results of Multiple Linear Regression of Self-Efficacy and Job engagement on Caregiver Behavior in Caregivers

_		_				
Independent	coefficient	Standard	test	Confidence	Significance	R^2
variables	Coefficient	coefficient	statistics	level	interval	K
Constant	79.975	-	15.853	< 0.001	(70.027,89.239)	
amount						0.084
Self-	0.2	0.096	1.355	0.177	(-0.091,0.49)	
Efficacy						
Work	0.423	0.246	3.458	0.001	(0.182,0.664)	
engagement						

Table 8: Mean and standard deviation of caregiver behavior, self-efficacy and job engagement of caregivers according to personal and job characteristics

Personal chara	acteristics		work	Self-efficacy	Care
			engagement		behavior
			Mean +	Mean +	Mean +
			standard	standard	standard
			deviation	deviation	deviation
Age(year)	Result of	P=0.081	P=0.117	P=0.465
		Pearson	r= -0.123	r= -0.11	r=0.052
		correlation			
		coefficient			
Duration of m	Duration of marriage (years)		P=0.378	P=0.983	P=0.811
		Pearson	r=0.087	r=0.002	r= -0.024
		correlation			
		coefficient			
Gender	female	150	33.31±6.62	29.84±5.54	99.96±11.61
	male	53	33.56±7.28	29.3±5.9	100.13±11.92
			t=0.239	t=0.597	t=0.089
	Independent t-test result		df=201	df=201	df=201
			P=0.812	P=0.551	P=0.93
Education	diploma	137	20.29±5.71	32.8±6.13	100.35±10.8
	A.D	35	20.37±5.89	35.42±8.33	99.11±13.14
	BS. and	30	20.25±5.11	33.58±7.37	99.48±9.5
	higher				
	Result of analysis of		P=0.824	P=0.122	P=0.996
	vari	ance	F=0.194	F=2.127	F=0.004
marital	single	86	33.39±6.99	30.41±5.91	100.29±11.06
status	married	85	34.42±6.32	29.11±6.06	101.28±12.44
	divorced	19	31.84±6.83	29.36±2.83	98.47±11.07
	Deceased	13	28.61±6.55	29.31±3.14	92.07±10.53
	spouse				
	Result of analysis of		P=0.023	P=0.498	P=0.824
	vari	ance	F=3.236	F=0.795	F=2.523
number of	0	21	33±5.36	30.14±5.31	98.04±12.57
children	1	32	34.41±7.07	26.96±6.05	101.43±13.21
	2	32	34.15±6.93	29.57±5.3	101.53±10.18
	3 and more	22	32.95±4.58	29.54±4.33	96.31±14.56
	Result of analysis of		P=0.769	P=0.101	P=0.343
	vari	ance	F=0.379	F=2.127	F=1.125
Occupational profile					
Shift system	Irregular	73	32.83±6.83	27.39±5.01	102.16±12.56
	shift				
	Regular shift	50	31.74±8.67	29.42±4.95	97.46±11.07

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	Fixed the	17	32.88±6.26	29.88±3.07	95.23±10.75
	night	26	26.02.2.05	22.7(.(.00	101 21 . 10 15
	Fixed the	26	36.03±3.95	33.76±6.08	101.31±10.15
	afternoon	25	25 . 4 51	21 (7. (11	100 40 . 11 30
	Fixed the	37	35±4.71	31.67±6.11	100.48±11.28
	morning		D 0 0 7 6	D 0.004	D 0.006
	Result of analysis of		P=0.056	P<0.001	P=0.086
	varia		F=2.365	F=8.794	F=2.07
type of	temporary	103	33.99±7.12	30.97±5.82	101.15±11.04
employment	formal	30	31.86±7.12	29.4±4.68	99.16±14.77
	company	44	32.59±5.28	28.22±4.81	96.06±11.77
	sectional	15	35.13±6.95	29.06±6.79	100.93±16.5
	pilot	11	32.45±7.62	25.36±4.34	106.09±13.34
	Result of a	nalysis of	P=0.392	P=0.004	P=0.053
	varia	ance	F=1.032	F=3.895	F=2.377
second job	yes	P=0.392	P=0.004	P=0.053	P=0.392
		F=1.032	F=3.895	F=2.377	F=1.032
	no	P=0.392	P=0.004	P=0.053	P=0.392
		F=1.032	F=3.895	F=2.377	F=1.032
	Independent	t-test result	t=0.842	t=2.881	t=1.191
			df=201	df=201	df=47.67
			P=0.401	P=0.004	P=0.24
Clinical	Six months	19	34.15±8.82	29.78±4.66	100.47±12.09
work	to 1 year				
experience	1 to 3 years	45	32.97±7.87	27.62±5.59	102.66±10.63
(years(3 to 5 years	34	32.47±7.3	30.76±4.27	101.35±8.08
	5 to 10 years	63	35.01±5.81	31.69±6.8	102.09±10.32
	More than	42	31.71±4.87	28.02±3.22	92.73±14.18
	10 years				
	Result of a	nalysis of	P=0.124	P=0.001	F=5.787
	varia		F=1.832	F=5.139	P<0.001
position	Nurse	43	34.82±7.83	30.76±4.91	99.35±9.37
•	Assistant	154	33.22±6.39	29.53±5.85	100.13±12.4
	nurse				
	Independent t-test result		t=1.33	t=1.215	t=0.431
			df=191	df=191	df=75.53
			P=0.185	P=0.226	P=0.668
	3million to 4	42	33.21±7.96	28.78±5.54	99.66±10.39
Amount of	4 million to 6	75	33.24±6.53	29.77±4.96	97.22±11.88
salary	6million and	86	33.56±6.44	30.08±6.2	102.17±11.78
received	more	00	55.50±0.77	50.00±0.4	102.17.11.70
10001104	Result of analysis of		P=0.94	P=0.471	P=0.052
	varia	•	F=0.94 F=0.061	F=0.471 F=0.755	F=3.001
	varia	111CC	r=0.001	r=0.755	r=3.001