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Original Article

Effect of comprehensive nursing interventions on psychological well-being and treatment adherence in dementia patients

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Abstract: Objective: To investigate the effects of comprehensive nursing interventions on psychological well-being and rehabilitation treatment adherence in patients with dementia. Methods: A retrospective analysis was conducted on 90 dementia patients treated at the First Hospital of Fuyang Hangzhou. Patients were divided into an observation group (n=45) and a control group (n=45). The control group received standard nursing care, while the observation group received comprehensive nursing interventions. Key outcomes included negative emotions, treatment adherence, quality of life, sleep quality, caregiver emotional well-being, and caregiver satisfaction. Results: The observation group had significantly lower Self-Rating Anxiety Scale (SAS) and Self-Rating Depression Scale (SDS) scores than the control group (both P<0.001). Treatment adherence, including disease awareness, medication compliance, and nutritional support, was significantly higher in the observation group (all P<0.05). The observation group showed better quality of lifeand lower Pittsburgh Sleep Quality Index (PSQI) scores (all P<0.001). Caregivers in the observation group reported higher satisfaction, with significantly lower SAS and SDS scores (all P<0.05). Mini-Mental State Examination (MMSE) scores were also higher in the observation group post-intervention (P<0.05). Additionally, the observation group had a better prognosis with fewer complications (P<0.05). Conclusion: Comprehensive nursing interventions significantly improve psychological well-being, treatment adherence, cognitive function, and overall quality of life for dementia patients. They also reduce anxiety, depression, and complications, and improve caregiver satisfaction. These findings support the benefits of comprehensive nursing interventions.

Keywords: Comprehensive nursing interventions, dementia, psychological well-being, treatment adherence

Introduction

Dementia is a common neurodegenerative disease in clinical practice, characterized by cognitive decline and impaired daily functioning [1-4]. While its exact etiology remains uncertain, known risk factors include advanced age, family history, Down syndrome, gender, mild cognitive impairment, previous head injury, chronic diseases, and unhealthy lifestyle habits such as smoking, alcohol use, physical inactivity, poor diet, and insufficient sleep [5-7]. Approximately 5% of the elderly population is affected by dementia, with over 6 million cases in China alone, contributing to a significant social and economic burden [8, 9].

As dementia progresses, patients often lose the ability to live independently, leading to increased dependence and heightened negative emotions. This dependency also places a considerable psychological and caregiving burden on primary caregivers, worsening their quality of life [10]. Currently, no definitive cure for dementia exists. However, studies suggest that patients with higher adherence to rehabilitation treatment demonstrate more stable conditions and slower disease progression compared to those with lower adherence [1]. Therefore, enhancing treatment adherence and psychological well-being are critical objectives in dementia care.

Traditional care models predominantly focus on medical treatment and rehabilitation, often overlooking emotional support and psychological well-being. Existing nursing approaches generally emphasize pathological manage-

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ment, offering limited interventions to reduce psychological distress and enhance overall quality of life. In contrast, comprehensive nursing integrates all aspects of care - from nurse responsibilities and care planning to health education and standardized protocols - providing a holistic approach to delivering high-quality care [11].

While recent research has examined the use of comprehensive nursing in managing cognitive function and disease progression in elderly dementia patients, its effect on caregivers' emotional well-being remains underexplored [12-14]. This study is the first to assess the effects of a comprehensive nursing model on caregiver anxiety and depression, using the Self-Rating Anxiety Scale (SAS) and the Self-Rating Depression Scale (SDS) for detailed psychological evaluation.

This study aims to evaluate the effectiveness of the comprehensive nursing model for improving psychological well-being and treatment adherence in dementia patients. Additionally, it examines the model's influence on patients' quality of life, sleep quality, cognitive function, and the emotional well-being and satisfaction of primary caregivers. The findings will provide valuable insight and practical guidance for enhancing clinical nursing practices.

Materials and methods

General information

The required sample size for each group was calculated using the formula: $n = [(Z_{\alpha/2} + Z_{\beta})/\Delta]^2 * (2 * SD^2)$. Where $Z_{\alpha/2}=1.96$, $Z_{\beta}=0.84$, $\Delta=8.9$, and $SD=15$. Based on this calculation, 45 dementia patients treated at the First Hospital of Fuyang Hangzhou from August 11, 2022 to February 11, 2024, were retrospectively selected for the observation group, and 45 additional patients were assigned to the control group. This study was approved by the Medical Ethics Committee of The First Hospital of Fuyang Hangzhou.

Inclusion criteria: Diagnosed with dementia according to established clinical guidelines [1]. Mini-Mental State Examination (MMSE) score <15 [15]. Age >60 years. Primary caregivers (direct descendants) without cognitive impairment.

Exclusion criteria: Severe cardiac, hepatic, or renal dysfunction in patients or caregivers. History of psychiatric disorders in patients or caregivers. Presence of malignant diseases in patients or caregivers. Participation in other clinical studies or inability to comply with study protocols.

Methods

The control group received standard nursing care, which included dementia-related education for patients and their families, along with routine follow-up phone calls [16].

The observation group received a comprehensive nursing intervention, consisting of the following measures [14].

Comprehensive nursing team: A dedicated five-member team was established, comprising an attending physician, head nurse, nursing team leader, and two senior nurses. The team developed a structured nursing plan, followed by standardized training to ensure consistent implementation.

Establishment of communication groups: WeChat and QQ groups were created to share daily messages on nursing interventions for self-care impairments and cognitive difficulties. Patients were encouraged to engage in physical activity and participate in suitable activities.

Rehabilitation training: Customized rehabilitation exercises were implemented based on each patient's recovery status to improve memory and cognitive function.

Psychological support: Nurses conducted daily video calls to assess the psychological status of both patients and caregivers, providing timely counseling. A professional psychologist also provided weekly visits to enhance emotional stability.

Health education: Educational materials, including manuals, videos, lectures, and WeChat messages, were distributed. Success stories of well-managed cases were shared to inspire optimism and a positive attitude toward treatment.

Dietary intervention: Patients received guidance on maintaining a balanced diet, avoiding

high-fat and spicy foods, and abstaining from smoking and alcohol.

Emotional support: Family members were encouraged to offer consistent emotional support, fostering a caring and respectful environment to boost the patient's psychological well-being.

Observation indicators

Primary indicators

Anxiety levels in patients and caregivers: Anxiety levels in both patients and primary caregivers were assessed using the SAS [17]. The SAS uses a 4-point scale to evaluate the frequency of anxiety symptoms: "1" for none or seldom, "2" for occasionally, "3" for frequently, and "4" for most or all of the time. Higher scores indicate more severe anxiety symptoms.

Depression levels in patients and caregivers: Depression levels were measured using the SDS, with severity classified as mild (53-62 points), moderate (63-72 points), and severe (>72 points) [18]. Higher scores denote more severe depressive symptoms.

Patients' quality of life: The Medical Outcomes Study 36-Item Short Form Health Survey (MOS SF-36) was used to evaluate quality of life across five dimensions: physical functioning, general health, social functioning, role-emotional, and mental health. Each dimension is scored from 0 to 100, with higher scores indicating better quality of life [19].

Adherence to rehabilitation treatment: A self-designed questionnaire assessed adherence in three domains: disease awareness, medication compliance, and nutritional support. The adherence rate was calculated as: adherence rate = (number of adherent cases/total number of cases) × 100%.

Secondary indicators

Sleep quality: Sleep quality was measured using the Pittsburgh Sleep Quality Index (PSQI) [20]. The PSQI includes 19 self-rated items and 5 partner-rated items, with only the self-rated items contributing to the total score. The 19 questions are grouped into 7 components, each scored from 0 to 3, with a total score range of 0 to 21. Higher scores indicate poorer sleep quality.

Cognitive function: Cognitive function was assessed using the Mini-Mental State Examination (MMSE), with higher scores reflecting better cognitive performance.

Caregiver satisfaction: Caregiver satisfaction was evaluated using a custom-designed questionnaire from the First Hospital of Fuyang Hangzhou. Satisfaction levels were categorized as "satisfied" (90-100 points), "basically satisfied" (60-89 points), and "unsatisfied" (<60 points). The satisfaction rate was calculated using: satisfaction rate = (number of satisfied + basically satisfied cases/total number of cases) × 100%.

Incidence of complications: The study compared the incidence of complications, including respiratory infections, fractures, urinary disorders, and gastrointestinal diseases, between the two groups to evaluate overall prognosis.

Statistical analysis

Data analysis was performed using SPSS 20.0. Categorical variables were expressed as counts and percentages (n/%) and analyzed using the χ^2 test. Continuous variables following a normal distribution were presented as mean ± standard deviation ($\bar{x} \pm s$). Between-group comparisons were conducted using independent t-tests, while within-group comparisons employed paired t-tests. A *P*-value of <0.05 was considered significant.

Results

Comparison of baseline characteristics

There were no significant differences between the observation and control groups regarding age, gender, comorbidities, disease duration, body mass index (BMI), education level, caregiver age, caregiver-patient relationship, or caregiver education level (all P>0.05), indicating comparability between groups (**Table 1**).

Comparison of anxiety and depression levels

Before the intervention, no significant differences were observed in SAS and SDS scores between the two groups (both P>0.05). After the intervention, both groups showed signifi-

Table 1. Comparison of general baseline data between the two groups (n/%)

Indicator	Observation group (n=45)	Control group (n=45)	χ^2/t	*P*
Age (years)	78.0±7.3	80.2±6.7	1.489	0.140
Sex			0.045	0.833
Male	24	23		
Female	21	22		
Concomitant Disease				
Hypertension	14	17	0.442	0.505
Coronary heart disease	16	12	0.830	0.362
Diabetes	7	3	1.801	0.179
Duration of disease (years)	4.1±2.6	4.0±2.1	0.201	0.841
BMI (kg/m^2)	23.32±2.24	23.89±2.56	1.412	0.160
Education level (n)			1.230	0.267
Junior high school or below	27	32		
High school or above	18	13		
Core caregiver				
Age of caregivers (years)	53.3±21.8	55.5±23.2	1.124	0.264
Relationship with patients (n)			0.178	0.672
Spouse	20	22		
Sons and daughters	25	23		
Caregiver education level (n)			3.778	0.051
Junior high school or below	26	30		
High school or above	19	15		

Note: BMI: Body mass index.

cant reductions in SAS and SDS scores, with the observation group exhibiting significantly lower scores than the control group (both P<0.001) (**Figure 1**).

Comparison of rehabilitation treatment adherence

The observation group achieved significantly higher adherence rates in disease awareness, medication compliance, and nutritional support compared to the control group (all P<0.05) (**Table 2**).

Comparison of quality of life

Before the intervention, quality-of-life scores were similar in both groups (P>0.05). Following the intervention, both groups showed significant improvements, with the observation group outperforming the control group in all dimensions of the MOS SF-36 (all P<0.01) (**Table 3**).

Comparison of sleep quality

There was no significant difference in PSQI scores between groups before the intervention (P>0.05). After the intervention, both groups demonstrated improved sleep quality, with the observation group showing significantly lower PSQI scores than the control group (P<0.001) (**Figure 2**).

Comparison of cognitive function (MMSE Scores)

Baseline Mini-Mental State Examination (MMSE) scores were comparable between the two groups (P>0.05). After the intervention, the observation group exhibited significantly higher MMSE scores compared to the control group (P<0.05) (**Figure 3**).

Comparison of anxiety and depression levels in caregivers

No significant differences in SAS and SDS scores were found between the caregivers of both groups before the intervention (both P>0.05). However, post-intervention, caregivers in the observation group had significantly lower SAS and SDS scores compared to those in the control group (both P<0.001) (**Figure 4**).

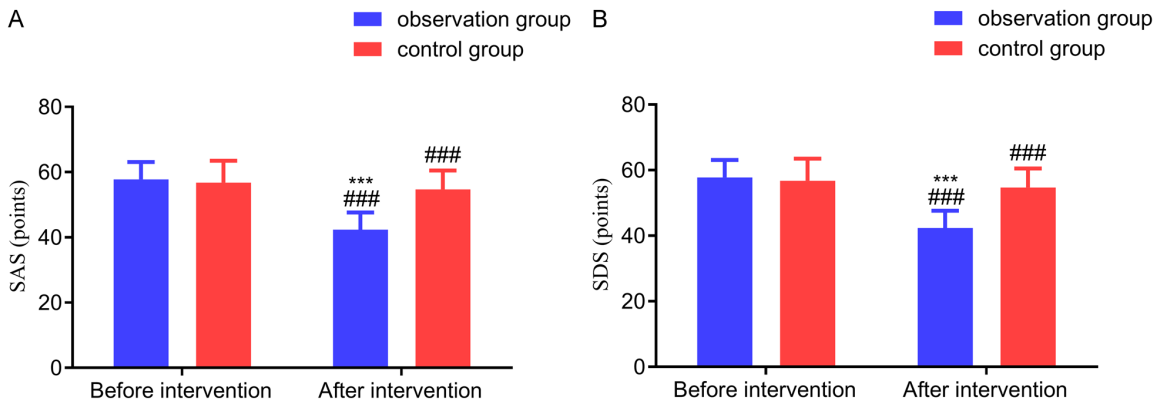

Figure 1. Comparison of SAS and SDS scores between the two groups. Note: (A) SAS scores for patients in the two groups. (B) SDS scores for patients in the two groups. Compared to the control group, ***P<0.001; Compared within the same group before intervention, ###P<0.001. SAS: Self-Rating Anxiety Scale; SDS: Self-Rating Depression Scale.

Table 2. Comparison of rehabilitation treatment compliance between the two groups (n, %)

Group	Disease awareness	Medication compliance	Nutritional support
Observation group (n=45)	41 (91.11)	42 (93.33)	41 (91.11)
Control group (n=45)	34 (75.56)	32 (71.11)	33 (73.33)
χ^2	3.921	7.601	4.865
P	0.047	0.006	0.027

Comparison of caregiver satisfaction

Caregiver satisfaction in the observation group was significantly higher than in the control group (P<0.05) (**Table 4**).

Comparison of complications

The observation group experienced a significantly lower incidence of complications, including respiratory infections, fractures, urinary disorders, and gastrointestinal diseases, compared to the control group (P<0.05) (**Table 5**).

Discussion

Comprehensive nursing has been widely used in managing chronic diseases, allergic conditions, surgical recovery, and reproductive health disorders, demonstrating favorable outcomes [21, 22]. This study expands the use of comprehensive nursing to dementia care, focusing on its effects on psychological well-being and treatment adherence.

Dementia patients often struggle with feelings of helplessness and discomfort, which are difficult to express due to cognitive decline and memory impairment. These challenges frequently manifest as anxiety and depression, yet studies suggest that only about 30% of dementia patients receive a formal diagnosis for these conditions [6]. Anxiety and depression can severely impair physical and social functioning, leading to a significant decline in quality of life [10].

In this study, the observation group, which received comprehensive nursing interventions, demonstrated significantly lower SAS and SDS scores compared to the control group, which received standard nursing care. This indicates that comprehensive nursing effectively reduces anxiety and depression in dementia patients. These findings are consistent with Liao et al., who reported that psychological interventions positively affect the emotional and cognitive well-being of dementia patients [23]. The improvement in emotional health in the observation group may be attributed to the holistic approach of comprehensive nursing, which included personalized psychological counseling and professional support.

Treatment adherence is critical for effective disease management. However, studies have shown that many dementia patients exhibit poor adherence to medical advice, often resisting treatment, which compromises disease control [2]. In this study, the observation group showed significantly higher adherence rates in disease awareness, medication compliance, and nutritional support compared to the control

Table 3. Comparison of quality of life scores (MOS SF-36) between the two groups (score, $\bar{x} \pm s$)

Item	Observation group (n=45)		Control group (n=45)		*t*	*P*
	Before intervention	After intervention	Before intervention	After intervention		
Somatic function	62.10±8.59	78.21±11.20*	62.32±8.01	66.09±9.52*	5.531	<0.001
General health	80.84±11.78	92.64±11.22*	81.30±10.23	86.68±12.23*	2.411	0.018
Social function	60.23±10.20	73.89±11.25*	60.91±10.11	65.58±10.43*	3.634	<0.001
Emotional role	50.59±8.10	64.81±9.78*	50.63±8.20	56.57±7.18*	4.556	<0.001
Mental health	49.42±7.52	69.15±10.91*	49.39±7.48	56.42±7.98*	4.312	<0.001

Note: *P<0.05 compared to before intervention. MOS SF-36: Medical Outcomes Study 36-Item Short Form Health Survey.

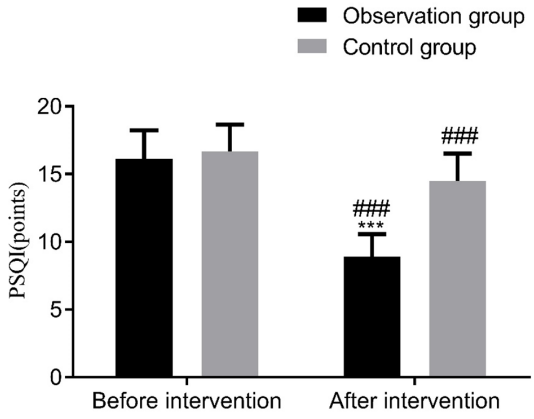

Figure 2. Comparison of PSQI scores between the two groups. Note: Compared to the control group, ***P<0.001; Compared within the same group before intervention, ###P<0.001. PSQI: Pittsburgh Sleep Quality Index.

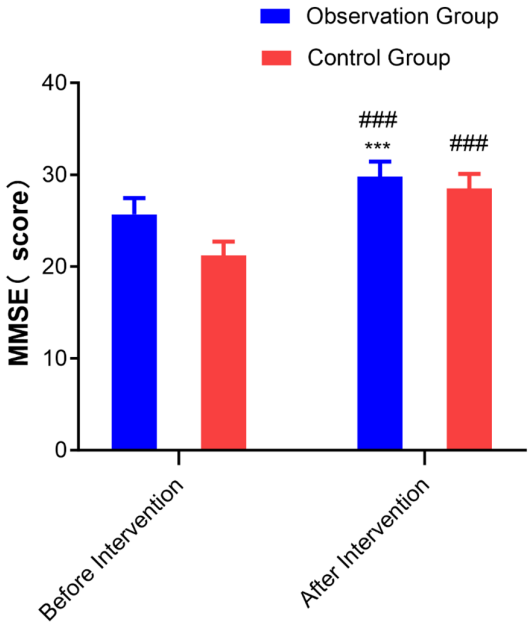

Figure 3. Comparison of MMSE cognitive function scores between the two groups. Note: Compared to before intervention, ***P<0.001; Compared within the same group, ###P<0.001. MMSE: Mini-Mental State Examination.

group. These results align with Chen et al., who also found that the comprehensive nursing model enhances treatment adherence in dementia patients [14]. The improved adherence observed in this study may result from several factors inherent in the comprehensive nursing approach. Emotional support and psychological interventions likely reduced anxiety and depression, increasing patient confidence in the treatment process and promoting better compliance. Additionally, health education and treatment guidance helped patients better understand their condition and the importance of adhering to treatment plans, encouraging active participation in their care.

Research indicates that dementia patients experience a gradual decline in memory, cognitive abilities, personality changes, and behavioral abnormalities, and these changes reduce self-care capabilities in daily living activities, leading to a lower quality of life compared to healthy elderly individuals [4]. In this study, the observation group exhibited a higher quality of life than the control group, suggesting that the comprehensive nursing model effectively enhances the quality of life in dementia patients. This improvement may result from increased treatment adherence, which helps reduce disease severity and slow progression, contributing to better overall well-being. Additionally, the observation group showed significantly better PSQI and MMSE scores compared to the control group. These findings suggest that comprehensive nursing offers clear benefits in improving sleep quality and cognitive function.

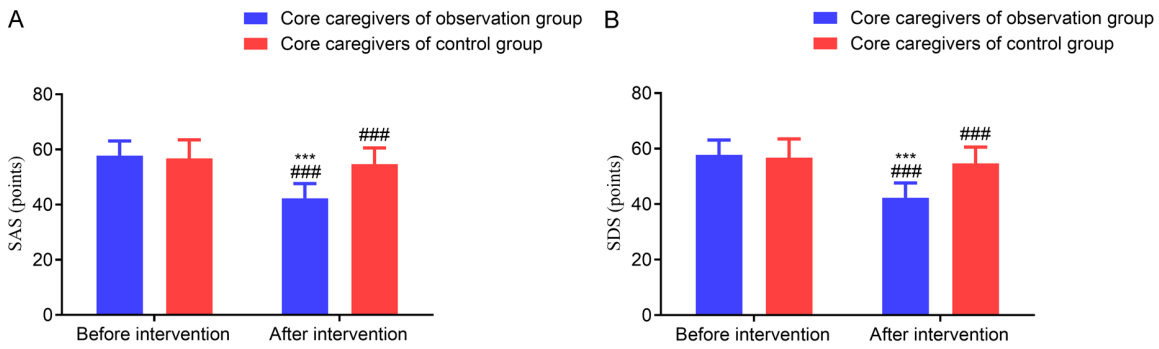

Figure 4. Comparison of SAS and SDS scores of core care givers between the two groups. Note: (A) SAS score of core caregivers in the two groups. (B) SDS score of core caregivers in the two groups. Compared to the control group, ***P<0.001; Compared within the same group before intervention, ###P<0.001.

Table 4. Comparison of nursing satisfaction between caregivers in the two groups [n (%)]

Group	Satisfied	Basically satisfied	Unsatisfied	Satisfaction rate
Observation group (n=45)	21 (46.67%)	20 (44.44%)	4 (8.89%)	41 (91.11%)
Control group (n=45)	16 (35.56%)	18 (40.00%)	11 (24.44%)	34 (75.56%)
χ^2		3.921		
P		0.047		

Table 5. Comparison of complications between the two groups [n (%)]

Group	Respiratory infections	Fractures	Urinary disorders	Gastrointestinal diseases	Total
Observation group (n=45)	3 (6.67%)	0 (0.00%)	0 (0.00%)	0 (0.00%)	3 (6.67%)
Control group (n=45)	4 (8.89%)	2 (4.44%)	4 (8.89%)	3 (6.67%)	13 (28.89%)
χ^2			7.601		
P			0.005		

The positive effects on sleep and cognition may be attributed to the combined effects of psychological support and emotional supportinterventions, which alleviate depression and reduce the negative influence of emotional distress on cognitive and sleep quality. In addition, the individualized approach of the comprehensive nursing model, involving regular assessments of psychological and physiological needs, enables the creation of personalized care plans. This tailored strategy helps minimize physiological stress and supports brain function recovery. The integration of health education and behavioral interventions also promotes better treatment adherence and lifestyle adjustments, further enhancing sleep quality and cognitive function.

Dementia's advanced stages often require long-term care, placing significant emotional and psychological burdens on primary caregivers [6]. Studies report that over 80% of caregivers for dementia patients experience anxiety and depression to varying degrees [24]. This study is the first to explore the effect of comprehensive nursing on SAS and SDS scores among primary caregivers. The observation group's caregivers exhibited significantly lower SAS and SDS scores than those in the control group, suggesting that comprehensive nursing effectively alleviates caregiver anxiety and depression. This benefit likely stems from the model's holistic approach, offering psychological support not only to patients but also to their caregivers, thereby enhancing caregivers' mental well-being.

Caregiver satisfaction with nursing care was also assessed, with the observation group reporting significantly higher satisfaction levels than the control group. This increased satisfaction may be attributed to the model's effective-

ness in reducing anxiety and depression, enhancing patient adherence to treatment, improving quality of life, and creating a more positive caregiving experience.

However, this study has limitations, including a relatively small sample size, single-center design, short follow-up period, and lack of quality-of-life assessment for caregivers. Future research should address these limitations by incorporating larger, multi-center studies with extended follow-up periods to further validate the efficacy of the comprehensive nursing model in dementia care.

In conclusion, the comprehensive nursing model significantly improved psychological well-being, treatment adherence, and quality of life in dementia patients. It also effectively reduces anxiety and depression among primary caregivers and enhances caregiver satisfaction. These findings highlight the model's potential for broader clinical application and underscore the need for further research to solidify its role in dementia care.

Disclosure of conflict of interest

None.

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References

[1] Livingston G, Huntley J, Liu KY, Costafreda SG, Selbæk G, Alladi S, Ames D, Banerjee S, Burns A, Brayne C, Fox NC, Ferri CP, Gitlin LN, Howard R, Kales HC, Kivimäki M, Larson EB, Nakasujja N, Rockwood K, Samus Q, Shirai K, Singh-Manoux A, Schneider LS, Walsh S, Yao Y, Sommerlad A and Mukadam N. Dementia prevention, intervention, and care: 2024 report of the Lancet standing Commission. Lancet 2024; 404: 572-628.

[2] Ayhan Y, Yoseph SA and Miller BL. Management of psychiatric symptoms in dementia. Neurol Clin 2023; 41: 123-139.

[3] Sieber C. Dementia: diagnosis and therapy. Dtsch Med Wochenschr 2022; 147: 137.

[4] Reuben DB, Epstein-Lubow G and Super N. The other dementia breakthrough-comprehensive dementia care. JAMA Neurol 2023; 80: 770-772.

[5] Lopez RP, Kris AE and Rossmassler SC. Nursing leadership and palliative care in long-term care for residents with advanced dementia. Nurs Clin North Am 2022; 57: 259-271.

[6] Schneider JA. Neuropathology of dementia disorders. Continuum (Minneap Minn) 2022; 28: 834-851.

[7] Day GS. Rapidly progressive dementia. Continuum (Minneap Minn) 2022; 28: 901-936.

[8] Loi SM, Cations M and Velakoulis D. Young-onset dementia diagnosis, management and care: a narrative review. Med J Aust 2023; 218: 182-189.

[9] Ramsey SU and Arnold RM. Prognostication in dementia. Handb Clin Neurol 2022; 190: 163-174.

[10] Wilbur J. Dementia: dementia types. FP Essent 2023; 534: 7-11.

[11] Cui LP and Wang SP. Effect of comprehensive nursing on swallowing function of senile dementia patients with dysphagia. Chin J Med Clin 2018; 18: 1638-1639.

[12] Hu HY and Wu SC. Application effect of community comprehensive nursing intervention in patients with mild to moderate Alzheimer's disease. China Med Herald 2016; 13: 163-167.

[13] Zhu HW, Zhang ZX and Jin SX. Application effect of comprehensive nursing intervention in patients with mild to moderate senile dementia. Pract J Card Cereb Pneumal Vasc Dis 2017; 25: 110-113.

[14] Chen YW, Li L, Zhang LH and Yang GH. Effect of comprehensive nursing intervention on psychological and rehabilitation treatment compliance of patients with Alzheimer's disease. Int J Psychiatry 2017; 716-718.

[15] Wei XX, Hao ZM, Chen L, Wang FL, Jing LW and Xing FM. Comparison of the brief CSI-Dand MMSE scales in screening for dementia in middle-aged and elderly Chinese people. Chin Gen Pract 2022; 25: 3866-3871.

[16] Fu WN, Liu QY, Chai Y and Liu B. Research progress on nursing care of senile dementia in China. Chin J Soc Med 2015; 32: 393-395.

[17] Dunstan DA, Scott N and Todd AK. Screening for anxiety and depression: reassessing the utility of the Zung scales. BMC Psychiatry 2017; 17: 329.

[18] Hunter EE and Murphy M. Zung Self-Rating Depression Scale. In: Kreutzer JS, DeLuca J, Caplan B, editors. Encyclopedia of Clinical Neuropsychology. New York, NY: Springer New York; 2011. pp. 2746-2747.

[19] Vitorino D, Martins F, Souza A, Galdino D and Prado G. Utilização do SF36 em ensaios clínicos envolvendo pacientes fibromiálgicos: determinação de critérios mínimos de melhora clinica. Revista Neurociências 2004; 12: 147-151.

[20] Buysse DJ, Hall ML, Strollo PJ, Kamarck TW, Owens J, Lee L, Reis SE and Matthews KA. Relationships between the Pittsburgh Sleep Quality Index (PSQI), Epworth Sleepiness Scale (ESS), and clinical/polysomnographic measures in a community sample. J Clin Sleep Med 2008; 4: 563-71.
[21] Wang SS, Liu Y, Huo ZY, Cao SQ, Wang XM and Liu YL. Research progress of comprehensive nursing model for patients with Alzheimer's disease. Int J Nurs 2023; 42: 1148-1152.
[22] Li J, Tan JB, Jiang H and Zhou M. Effect of comprehensive nursing program on rehabilitation and complications of patients with tibia and fibula fracture. Mod J Integr Tradit Chin West Med 2023; 32: 2313-2316.
[23] Liao JF, Zhao B, Wang CF and Huang J. Effect of quetiapine combined with group psychotherapy on mental behavior, cognition and other aspects of elderly dementia. Smart Healthcare 2023; 9: 263-266.
[24] Wang YY and Wang CJ. Psychological status and intervention strategies of family caregivers of senile dementia patients: a case study of Luolong District, Luoyang City. Chin Gen Pract 2019; 22: 253-256.