ORIGINAL

IMPACT OF COMPREHENSIVE ATHLETE-CENTRIC NURSING USING THE INFORMATION-MOTIVATION-BEHAVIOR SKILLS MODEL AND MIND MAPPING ON SELF-CARE AND RECOVERY IN ATHLETES UNDERGOING CANCER TREATMENT

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ABSTRACT

Objective: To evaluate the effectiveness of an athlete-centric nursing approach, integrating the Information-Motivation-Behavioral Skills model (IMB) with mind mapping, on improving self-care and recovery in athletes undergoing cancer treatment. **Methods:** This study involved 54 athlete patients diagnosed with cancer and undergoing treatment at our institution from January 2020 to January 2022. Participants were randomly assigned into two groups: the control group (27 athletes) receiving standard care, and the intervention group (27 athletes) receiving comprehensive nursing care based on the IMB model and mind mapping. Parameters assessed included nursing satisfaction, quality of life, self-efficacy, hope level, self-care ability, psychological state, and cancer-related fatigue. **Results:** The intervention group showed a significantly higher total satisfaction rate (96.30%) compared to the control group (70.37%, P < 0.05). Post-treatment, the intervention group exhibited lower scores in anxiety and depression, and higher in self-efficacy (P < 0.05). Notably, emotional, physical, and cognitive fatigue levels were significantly reduced in the intervention group (P < 0.05). Furthermore, the intervention group demonstrated enhanced self-care skills, health knowledge, self-responsibility, and autonomy (P < 0.05). Positive behavioral attitudes, emotional well-being, and intimate relations were also markedly improved in the intervention group (P < 0.05). Lastly, significant improvements were observed in cognitive, physical, role functioning, general health, social

functioning, and vitality among the intervention group (P < 0.05). **Conclusion:** The tailored, athlete-centric nursing approach using the IMB model combined with mind mapping significantly enhances hope levels, psychological well-being, self-efficacy, self-care capabilities, and reduces cancer-related fatigue in athletes undergoing cancer treatment. This leads to a marked improvement in their quality of life, highlighting the value of personalized, comprehensive nursing care in the treatment and recovery of athlete patients with cancer.

KEYWORDS: Athlete-Centric Nursing; mind mapping; bladder cancer; self-care skills; Athlete Mental Health; infusion chemotherapy; Physical and Cognitive Functioning

1. INTRODUCTION

The intersection of elite athletics and cancer treatment presents a unique set of challenges, both in terms of maintaining optimal health and ensuring effective recovery. This study explores the impact of a comprehensive athlete-centric nursing approach, utilizing the Information-Motivation-Behavior Skills (IMB) Model and mind mapping techniques, on self-care and recovery in athletes undergoing cancer treatment. Our focus is to assess how these innovative strategies can be tailored to meet the specific needs of athletes, who typically face a complex balance between their demanding training schedules and the rigors of cancer treatment (Jensen, 2021). Athletes diagnosed with cancer encounter a dual challenge: managing their disease while striving to maintain their physical conditioning and performance levels. Traditional cancer care models often do not fully address the unique psychological and physical demands faced by this population.

To bridge this gap, we propose a nursing approach that is finely tuned to the needs of athletes, incorporating the IMB Model, which focuses on providing information, enhancing motivation, and developing behavioral skills, alongside mind mapping techniques, which aid in organizing and visualizing complex information and treatment plans(Anderson, 2018b).The IMB Model, developed initially for health-related behavior change, offers a robust framework for understanding and influencing the behaviors necessary for effective self-care during cancer treatment (Drawert, Flies, Matthew, Powell, & Rumsey, 2022). It emphasizes the importance of accurate information about the condition and its treatment, the motivation to act on this information, and the behavioral skills required to implement effective self-care strategies. This model aligns well with the mindset of athletes, who are typically disciplined, goal-oriented, and accustomed to structured training regimens(Batura, Hashemzehi, & Colemeadow, 2018).

Mind mapping, on the other hand, is a visual tool that helps in organizing and processing information. For athletes undergoing cancer treatment, mind maps can serve as a powerful technique to understand and manage the complexities of their treatment schedules, medication regimens, and recovery protocols. This method also facilitates better communication between healthcare providers and athletes, allowing for a more personalized and comprehensible approach to treatment and self-care(Dunsmore et al., 2021).

Through this study, we aim to evaluate how the combination of the IMB Model and mind mapping can enhance self-care practices among athletes undergoing cancer treatment. We hypothesize that this approach will not only improve their understanding and management of the treatment process but also positively impact their physical and psychological recovery(Singh, Eguchi, Min, & Fischer, 2020). By focusing on the unique needs of this population, we seek to contribute to the development of more effective, athlete-centric cancer care protocols, ultimately aiding athletes in navigating their treatment journey while maintaining their identity and commitment to their sport. The report is as follows.

2. MATERIALS AND METHODS

2.1 General data

The research subjects selected 54 patients with bladder cancer who were admitted to our hospital from January 2020 to January 2022.

Inclusion criteria: (1) All met the diagnostic criteria for bladder cancer in "Surgery", and were diagnosed by surgical and pathological diagnosis; (2) Age > 18 years; (3) estimated survival time > 6 months; (4) postoperative infusion chemotherapy; (5) informed consent of the patients; (6) complete imaging examinations and medical records of the patients.

Exclusion criteria: (1) patients with coagulation disorders; (2) patients with mental system diseases; (3) patients with communication disorders; (4) patients with other malignant tumors; (5) patients with heart, liver and kidney insufficiency. According to the random number table method, there were 16 males and 11 females in the control cluster (27 cases), aged 35-78 years, with an average age of (51.29±2.74) years; 22 cases of urethra and bladder tumor resection.

The test cluster (27 cases) consisted of 15 males and 12 females, aged 33 to 81 years, with an average age of (51.38±2.69) years; surgical methods: 6 cases of partial cystectomy, 21 cases of transurethral resection of bladder tumor example.

2.2 Methods

The control cluster received routine nursing, including distributing brochures to explain the methods, procedures and precautions of perfusion chemotherapy, instructing patients on diet, exercise, and psychological counseling. The test cluster conducts whole-course nursing based on the IMB joint mind map:

(1) Formation of the whole process nursing team: Organise the specialist nurses, head nurses and deputy head physicians within the department to set up a whole process nursing team, with the head nurse as the team leader, responsible for arranging, coordinating and supervising nursing work; organise regular training on IMB expertise and organise members to learn about the introduction and production of mind maps and the method of combining IMB models with mind maps, etc., and conduct strict assessments, and those who pass the assessment can participate in in nursing work, and those who fail to pass the assessment continue to train until they pass the assessment; organise cluster discussions for members to analyse the patient's condition and formulate a full nursing plan in the light of the actual situation. Patients continue to train until they pass the assessment; organize members to hold cluster discussions to analyze the patient's condition, and formulate a full-course nursing plan based on the actual situation. (2) Mind map production: The team members consult relevant domestic and foreign literature, combine the actual situation of the department, master the mind map production method, use the mind map production software, and make the mind map based on the IMB model, which is divided into 3 main lines including information, motivation and behavioral intervention, the content of branch lines is constructed by the main line, and finally the mind map is completed, and the whole process of nursing is carried out according to the content in the mind map.

(3) Information intervention: actively and positively communicate with patients after admission, ask patients about their subjective feelings, assess the degree of knowledge of patients and their families about disease knowledge, infusion chemotherapy and nursing measures, ask patients about their concerns and summaries them, collate nursing difficulties; the nurse-in-charge issues a health knowledge booklet to patients, using such methods as dialogue with pictures, real-life demonstrations and multimedia videos to explain in detail about disease knowledge, chemotherapy methods, chemotherapy procedures and precautions. During the education period, patients and their family members are listened to and their questions are answered or effective suggestions are provided; patients are guided to tell their inner thoughts and subjective feelings, and their legitimate thoughts and positive feelings are affirmed, encouraged and supported. Patients were instructed to carry out relaxation training, play soft music to divert their

attention, and instruct their families to accompany, care for and look after them, so that they could feel the emotional support from their families. Patients were informed in advance of the possible adverse effects of chemotherapy infusion, and were helped to prepare themselves psychologically, and the importance of active cooperation in improving their prognosis was stressed. (4) Motivational intervention: The role and importance of perfusion chemotherapy was explained again, especially the prevention effect on tumour recurrence; perfusion registration cards were made, contact information of patients or family members was taken, a WeChat cluster was organized to inform patients by WeChat or telephone 1d before chemotherapy, and patients were instructed to abstain from drinking 4h before perfusion; regular patient exchange meetings were organized to share experiences with each other, and outdoor activities were organized as appropriate to allow patients with successful treatment to present themselves. (5) Behavioral skills intervention: The patient's medical history was asked before the infusion, and the patient was asked about the adverse reactions after the last chemotherapy treatment, and the explanation was done well in advance, the patient was instructed to carry out routine blood and urine examination before the infusion, and was instructed to ensure sufficient sleep the night before the chemotherapy treatment. The catheter was fully lubricated with paraffin oil, and the urethra was lubricated with 1ml of lidocaine and 1ml of sterile paraffin oil for 2min before catheterization. After instillation, re-emphasize the possible adverse effects such as frequent urination and urinary urgency, which usually do not require special treatment and can be gradually reduced after 2d-3d; monitor the volume and colour of urine and instruct patients to drink more water after chemotherapy. For patients with gastrointestinal discomfort such as nausea and vomiting after chemotherapy, patients should be instructed to eat before infusion to relieve gastrointestinal discomfort; the nutritional status of patients should be assessed and an individualized diet plan should be formulated based on patients' dietary preferences, with more high-protein, high-fibre foods, no stimulating and spicy foods and a light diet.

2.3 Observation indicators

2.3.1 Nursing satisfaction

When the patients were discharged from the hospital, they were instructed to fill in the hospital-made satisfaction questionnaire (15 items in total), and a total of 54 questionnaires were distributed, all of which were recovered as valid questionnaires; the questionnaire had a total of 4 dimensions, namely comfort (5 items, 0-15 points), subjective well-being (5 items, 0-15 points), language expression (3 items, 0-9 points) and nursing attitude (2 items, 0-6 points), the total point is 45 points, and a point of more than 30 points is very satisfied, a point of 15-30 is basically satisfied, and a point of less than 15 is not satisfied. Total satisfaction rate = (very satisfied +

basic satisfaction) number of cases/number of samples × 100%.

2.3.2 Psychological status

Before and aftercare, the psychological state was assessed by referring to the Self-Rating Anxiety Scale (SAS)/ Self-Rating Depression Scale (SDS), each with 20 items, with a total point of 100 points.

2.3.3 Self-efficacy

Before and aftercare, self-efficacy was assessed with reference to the General Self-Efficacy Scale (GSES). The scale has a total of 10 items, with 4 points for complete correctness, 3 points for most correctness, 2 points for partial correctness, and 1 point for completely incorrect. 10-40 points, the point is proportional to self-efficacy.

2.3.4 Cancer-related fatigue

Before and aftercare, the cancer-related fatigue scale (CFS) was used to evaluate the degree of cancer-related fatigue, with a total of 3 dimensions and 15 items, namely emotional fatigue (4 items, 0-16 points), physical fatigue (7 items, 0-28 points) and cognitive fatigue (4 items, 0-16 points), the total point is 60 points, and the point is proportional to the degree of cancer-related fatigue.

2.3.5 Self-protection ability

Before and aftercare, the Exercise of Self-Care Agency (ESCA) was used to evaluate self-care ability, with a total of 43 items in 4 dimensions, namely self-care skills (12 items, 0-48 points), health knowledge cognition (17 items, 0- 68 points), self-responsibility (6 items, 0-24 points), concept of autonomy (8 items, 0-32 points), the total point is 172 points, and the point is proportional to the self-protection ability.

2.3.6 Hope level

Before and aftercare, the Herth Hope Index scale was used to evaluate the level of hope. There were three dimensions in total, namely positive attitude, behavioral attitude and intimacy. Each point was 48 points, and the point was proportional to the level of hope.

2.3.7 Quality of life

Before and aftercare, the quality of life was assessed by referring to the Short Form 36 Health Survey Questionnaire (SF-36), which was pointd from 6 dimensions of cognitive function, physical function, role function, general health, social function and vitality. The points were proportional to the quality of life.

2.4 Statistical analysis

The data were analyzed by SPSS23.0 software, measurement data (conform to normal distribution) were expressed as ($\bar{x}$±s) (t test), and count data were expressed as % (χ2 test). P<0.05 means that the variation is statistically significant.

3. RESULTS

3.1 Contrast of nursing satisfaction between the two clusters

The overall satisfaction rate of the test cluster was 96.30% upper than that of the control cluster, 70.37% (P<0.05), Figure 1.
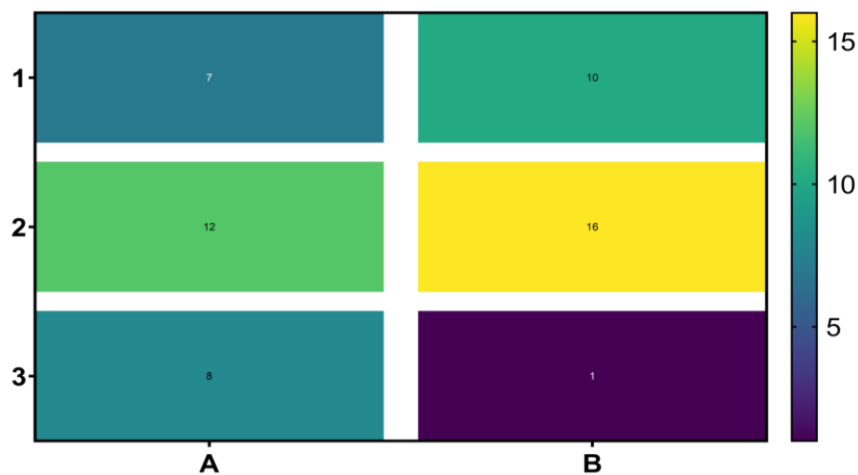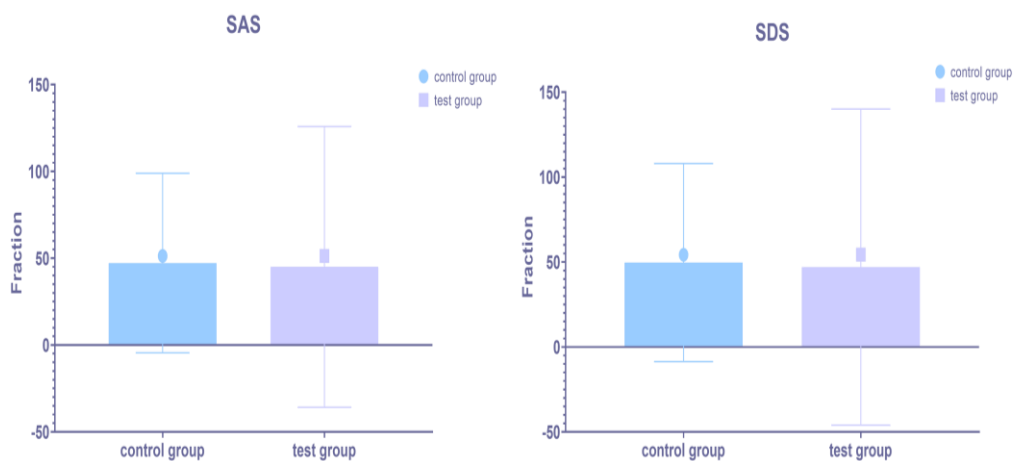

Figure 1. Nursing satisfaction

3.2 Contrast of psychological state and self-efficacy points between the two clusters

None significant variation in SAS, SDS and GSES points between the two clusters before nursing (P>0.05); aftercare, the SAS and SDS points of the test cluster were bottom than those of the control cluster, and the GSES point was upper than that of the control cluster (P<0.05), Figure 2.
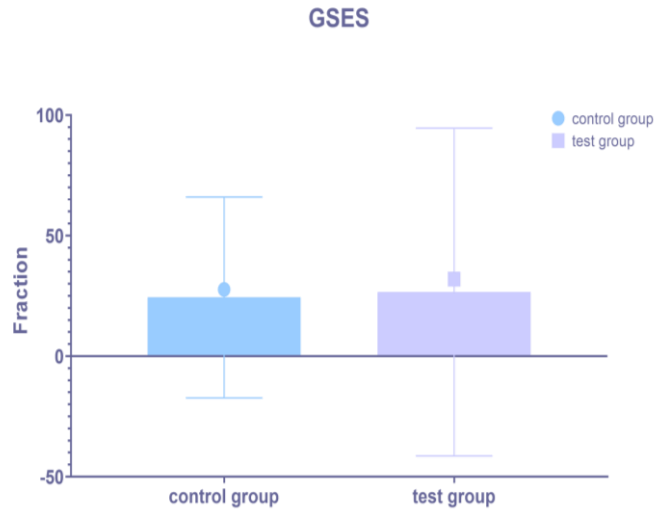
Figure 2. Mental state and self-efficacy

3.3 Contrast of cancer-related fatigue points between the two clusters

None significant variation in the points of emotional fatigue, physical fatigue and cognitive fatigue between the two clusters before nursing (P>0.05); the points of emotional fatigue, physical fatigue and cognitive fatigue in the test cluster aftercare were bottom than those in the control cluster (P<0.05), Figure 3.
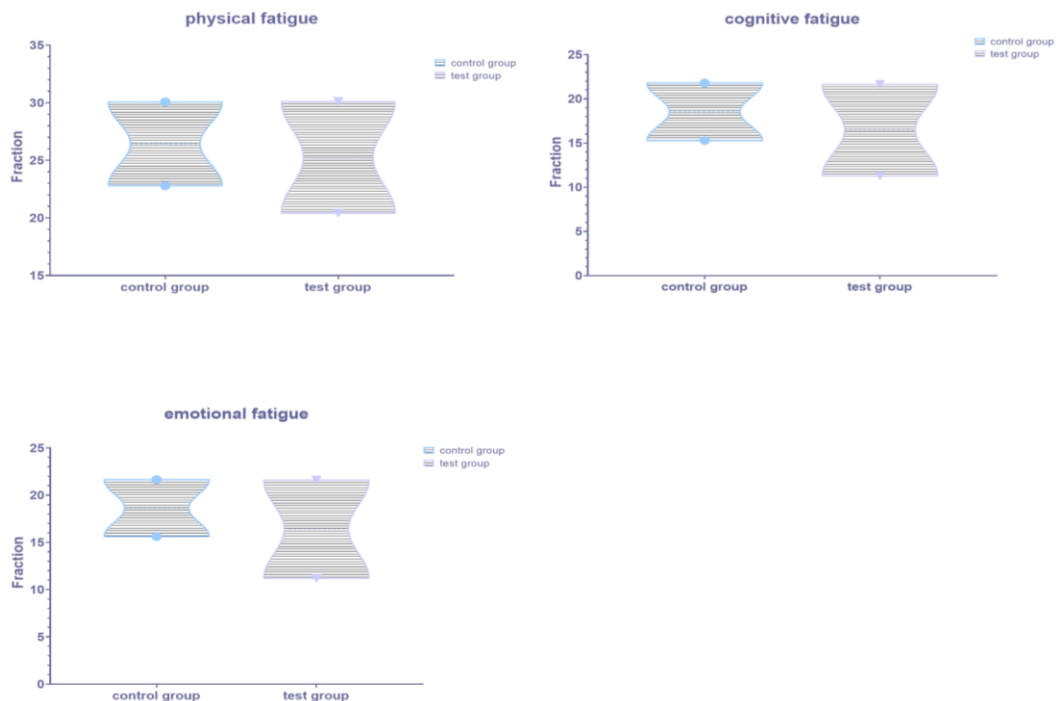

Figure 3. Cancer-related fatigue

3.4 Contrast of self-care ability points between the two clusters

None significant variation in the points of self-care skills, health knowledge cognition, self-responsibility and autonomy concept between the

two clusters before nursing (P>0.05). The points were upper in the test cluster than that in the control cluster (P < 0.05), Figure 4.
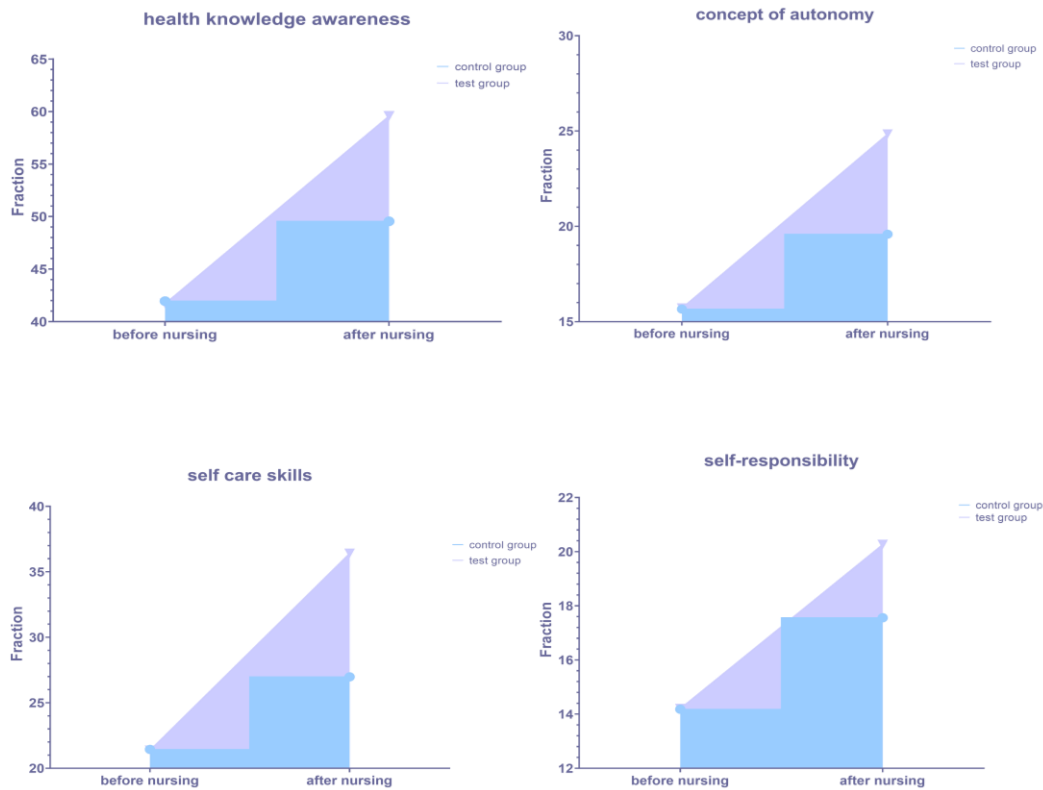

Figure 4. Self-care ability

3.5 Contrast of the two clusters of hope level points

None significant variation in the points of behavioral attitude, positive attitude and intimate relationship between the two clusters before nursing (P>0.05). The behavioral attitude, positive attitude and intimacy points of the test cluster were upper than those of the control test aftercare (P<0.05), Table 1.

Table 1 Contrast of hope level points between the two clusters ($\bar{x}$±s)

CLUSTER	CASES	BEHAVIOURAL ATTITUDES		POSITIVE ATTITUDE		INTIMACY	
		PRE-CARE	AFTER-CARE	PRE-CARE	AFTER-CARE	PRE-CARE	AFTER-CARE
Control cluster	27	28.85±3.24	32.95±2.57	27.69±5.12	34.98±2.54	28.12±3.14	36.15±1.66
Test cluster	27	28.64±3.54	41.54±1.56	27.33±5.18	40.54±2.05	28.09±3.54	40.82±1.12
t		0.227	14.846	0.256	8.851	0.032	12.117
P		0.821	0.000	0.798	0.000	0.973	0.000

3.6 Contrast of quality of life points between the two clusters

None significant variation in the points of cognitive function, physical

function, role function, general health, social function and vitality between the two clusters before nursing (P>0.05). The points of general health, social function and vitality in the test cluster were upper than those in the control cluster (P<0.05), Table 2.

Table 2 Contrast of quality of life points between the two clusters ($\bar{x}$±s)

CLUSTER	CASES	COGNITIVE FUNCTIONS		SOMATIC FUNCTIONS		CHARACTER FUNCTIONS		GENERAL HEALTH		SOCIAL FUNCTIONS		VITALITY	
		PRE-CARE	AFTER-CARE	PRE-CARE	AFTER-CARE	PRE-CARE	AFTER-CARE	PRE-CARE	AFTER-CARE	PRE-CARE	AFTER-CARE	PRE-CARE	AFTER-CARE
Control cluster	27	70.55 ±3.49	81.35± 5.18	72.56 ±3.47	81.59± 3.61	75.26 ±3.51	84.39± 4.18	70.69 ±1.26	80.39± 1.44	73.62 ±3.12	82.69± 3.11	72.16 ±5.13	83.59± 3.45
Test cluster	27	70.84 ±3.47	89.55± 5.16	72.35 ±3.48	88.95± 3.24	75.35 ±3.47	92.18± 4.44	70.46 ±1.14	89.08± 1.62	73.18 ±3.27	90.54± 1.87	72.19 ±5.21	91.35± 3.44
t		0.306	5.827	0.222	7.884	0.094	6.637	0.703	20.832	0.505	11.240	0.021	8.276
P		0.760	0.000	0.825	0.000	0.924	0.000	0.485	0.000	0.615	0.000	0.983	0.000

4. DISCUSSION

Bladder cancer has a high incidence in China. Middle-aged and elderly men are the high-risk cluster, and female patients are relatively rare. The treatment method in the cluster is surgery combined with chemotherapy, which can improve symptoms, reduce the rate of metastasis and recurrence, and prolong the survival time of patients (Taarnhøj, Lindberg, Johansen, & Pappot, 2019) (Jung et al., 2019). Intravesical chemotherapy refers to the instillation of chemotherapy drugs into the bladder through the urethra, so that the drugs contact with the bladder mucosa to kill residual cancer cells, so as to achieve the therapeutic effect. However, due to the long cycle of perfusion chemotherapy and the high cost of treatment, the catheter needs to be inserted repeatedly, which can cause complications such as gastrointestinal reactions, intubation pain, and bladder irritation symptoms, which adversely affect the patient's treatment compliance. It can easily lead to treatment interruption and adversely affect the treatment effect (Goltz, Major, Goffney, Dunn, & Latini, 2021). In addition, due to the lack of correct cognition of disease knowledge and infusion chemotherapy, some patients are more likely to have various negative emotions due to their fear of causing adverse reactions. It increases the risk of tumor cell proliferation and forms a vicious circle (Steinmetz, Gantz, Fiscella, & Messing, 2022). Therefore, effective interventions are needed to improve patients' treatment compliance and promote self-care ability.

In the past, routine nursing measures were often used for patients with perfusion chemotherapy, which could help patients understand the disease and perfusion chemotherapy through health education. Subjective initiative,

and often ignore the psychological needs of patients, only focus on physiological nursing measures, cannot achieve ideal nursing effect (Anderson, 2018a; Flannery et al., 2018; Rammant, Fonteyne, et al., 2021). As a result, to promote the change of patients' behavior, to fully mobilize their initiative, to improve medical compliance awareness and behavior, can promote the improvement of nursing effect. The IMB model is a behavioral change theoretical model proposed by foreign scholars Fisher et al. in 1992. The model can guide patients to master behavioral change methods and skills by providing specific information and creating an environment conducive to individual change of healthy behaviors, and promote behavioral change. Motivational reinforcement, when information, motivation and behavioral skills reach a certain level, individual behavioral change can be completed (Sherif, 2018).

Mind map is a commonly used health education tool in clinical practice, which can display complex knowledge in simple graphics to help patients understand and master knowledge (Rammant, Deforche, et al., 2021). The whole-course nursing based on the IMB combined mind map fully combines the advantages of the IMB model and the mind map. The IMB model integrates the characteristics of various behavioral intervention theories, such as drawing on the understanding of "motivation" in the theory of rational behavior, taking into account the changes in behavior. Psychological factors are the important role of motivation, and the concept of "self-efficacy" in social cognitive theory is introduced into the model, focusing on the importance of individual subjective initiative to the improvement of self-protection ability, and combining mind mapping on the basis of IMB can make nursing The process is clearer and easier to implement (Tan & Kelly, 2018) (Yeary et al., 2022) (Rammant et al., 2022). In this study, the test cluster received the whole course of nursing based on IMB combined with mind mapping. To analyze the reasons, the IMB model draws on the understanding of motivation from rational behavior, and introduces the concept of self-efficacy. It divides the factors that affect behavior into three parts, namely information, motivation and behavioral skills.

There is a certain relationship between the three factors, and the best intervention plan is to be found based on this correlation. Based on the whole-process nursing based on the IMB model combined with the mind map, the use of the mind map method to draw the IMB nursing measures can facilitate the nursing staff to consult and understand, so as to improve the quality of nursing (Hoeh et al., 2022) (Bessa et al., 2019). In the process of information intervention, by distributing health knowledge manuals, playing propaganda videos, and viewing pictures and dialogues, it can improve the interest of health education, abandon the boring characteristics of text description, and make it easier for patients to understand, so as to promote patients to fully grasp disease knowledge and understand, and promote treatment compliance and improve psychological state (Krantz et al., 2018).

Secondly, in the process of motivational intervention, the intervention is carried out around the psychological level.

Through the exchange of experience and positive reinforcement among patients, it can help patients to enhance their confidence in treatment, improve their level of hope, help reduce the degree of cancer-related fatigue in patients, and improve self-efficacy. In addition, in the process of behavioral intervention, carrying out targeted interventions at different stages of perfusion chemotherapy can improve patient comfort, promote satisfaction, and inform possible adverse reactions in advance, guide the correct treatment of adverse reactions, and improve patient self-care ability, and alleviate the psychological burden of all adverse events, so as to promote the improvement of quality of life.

5. Conclusion

This investigation into the efficacy of a comprehensive athlete-centric nursing approach, utilizing the Information-Motivation-Behavior Skills (IMB) Model combined with mind mapping, for athletes undergoing cancer treatment has provided valuable insights into enhancing self-care and recovery processes. Our findings affirm that the unique physical and psychological demands of athletes, coupled with the challenges of cancer treatment, necessitate a specialized approach to healthcare. The integration of the IMB Model and mind mapping techniques has shown a significant positive impact on the athletes' ability to manage their treatment and recovery.

The IMB Model's focus on providing tailored information, enhancing motivation, and developing behavioral skills has proved effective in empowering athletes. It has facilitated a deeper understanding of their condition and treatment, instilled a stronger sense of control, and fostered the development of practical self-care skills. These elements are crucial for athletes who are accustomed to discipline and structure in their training and seek to apply the same principles to their recovery journey.

Mind mapping emerged as an invaluable tool in this context, offering a visual and intuitive method for athletes to organize, process, and retain complex information related to their treatment. It has enabled more efficient communication between healthcare providers and athletes, ensuring that care plans are clearly understood and more effectively implemented. The visual nature of mind mapping resonated well with athletes, aiding in the visualization of their treatment journey and recovery goals.

Our study underscores the importance of adopting an individualized approach to nursing care for athletes undergoing cancer treatment. The positive outcomes observed highlight the need for healthcare systems to recognize and address the unique challenges faced by this group. By tailoring

care strategies to their specific needs, we can enhance their overall treatment experience, promote better health outcomes, and support their return to athletic pursuits.

Data Availability

The experimental data used to support the findings of this study are available from the corresponding author upon request.

Conflicts of Interest

The authors declared that they have no conflicts of interest regarding this work.

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REFERENCES

Anderson, B. (2018a). Bladder cancer: Overview and disease management. Part 1: Non-muscle-invasive bladder cancer. *British Journal of Nursing, 27*(9), S27-S37.

Anderson, B. (2018b). Bladder cancer: overview and management. Part 2: muscle-invasive and metastatic bladder cancer. *British Journal of Nursing, 27*(18), S8-S20.

Batura, D., Hashemzehi, T., & Colemeadow, J. (2018). A care bundle to improve perioperative mitomycin use in non-muscle-invasive bladder cancer. *International Urology and Nephrology, 50*, 1053-1059.

Bessa, A., Maclennan, S., Enting, D., Bryan, R., Josephs, D., Hughes, S., . . . Nair, R. (2019). Consensus in bladder cancer research priorities between patients and healthcare professionals using a four-stage modified Delphi method. *European urology, 76*(2), 258-259.

Drawert, B., Flies, A. S., Matthew, S., Powell, M., & Rumsey, B. (2022). Saving the Devils is in the details: Tasmanian Devil facial tumor disease can be eliminated with interventions. *Letters in Biomathematics, 9*(1), 121. doi:10.30707/LiB9.1.1681913305.269822

Dunsmore, J., Duncan, E., Mariappan, P., de Bruin, M., MacLennan, S., Dimitropoulos, K., . . . N'Dow, J. (2021). What influences adherence to guidance for postoperative instillation of intravesical chemotherapy to patients with bladder cancer? *BJU international, 128*(2), 225-235.

Flannery, K., Cao, X., He, J., Zhong, Y., Shah, A. Y., & Kamat, A. M. (2018). Survival rates and health care costs for patients with advanced bladder cancer treated and untreated with chemotherapy. *Clinical Genitourinary Cancer, 16*(4), e909-e917.

Goltz, H. H., Major, J. E., Goffney, J., Dunn, M. W., & Latini, D. (2021).

Collaboration between oncology social workers and nurses: A patient-centered interdisciplinary model of bladder cancer care. Paper presented at the Seminars in Oncology Nursing.

Hoeh, B., Flammia, R. S., Hohenhorst, L., Sorce, G., Chierigo, F., Panunzio, A., . . . Briganti, A. (2022). Effect of neoadjuvant chemotherapy on complications, in-hospital mortality, length of stay and total hospital costs in bladder cancer patients undergoing radical cystectomy. *Cancers, 14*(5), 1222.

Jensen, B. T. (2021). *Organization factors in the ERAS bladder cancer pathway: the multifarious role of the ERAS nurse, why and what is important?* Paper presented at the Seminars in Oncology Nursing.

Jung, A., Nielsen, M. E., Crandell, J. L., Palmer, M. H., Bryant, A. L., Smith, S. K., & Mayer, D. K. (2019). Quality of life in non-muscle-invasive bladder cancer survivors: a systematic review. *Cancer nursing, 42*(3), E21-E33.

Krantz, D., Hartana, C. A., Winerdal, M. E., Johansson, M., Alamdari, F., Jakubczyk, T., . . . Zirakzadeh, A. A. (2018). Neoadjuvant chemotherapy reinforces antitumour T cell response in urothelial urinary bladder cancer. *European urology, 74*(6), 688-692.

Rammant, E., Deforche, B., Van Hecke, A., Verhaeghe, S., Van Ruymbeke, B., Bultijnck, R., . . . Decaestecker, K. (2021). Development of a pre-and postoperative physical activity promotion program integrated in the electronic health system of patients with bladder cancer (The POPEYE study): An intervention mapping approach. *European journal of cancer care, 30*(2), e13363.

Rammant, E., Fonteyne, V., Van Goethem, V., Verhaeghe, S., Raes, A., Van Hemelrijck, M., . . . Van Hecke, A. (2021). *Supportive roles of the health care team throughout the illness trajectory of bladder cancer patients undergoing radical cystectomy: a qualitative study exploring the patients' perspectives.* Paper presented at the Seminars in oncology nursing.

Rammant, E., Van Hecke, A., Decaestecker, K., Albersen, M., Joniau, S., Everaerts, W., . . . Van Hemelrijck, M. (2022). Supportive care needs and utilization of bladder cancer patients undergoing radical cystectomy: a longitudinal study. *Psycho-Oncology, 31*(2), 219-226.

Sherif, A. (2018). The long perspective in emergence of neoadjuvant chemotherapy for bladder cancer in Ontario, Canada—space for improvement with regular and organized multidisciplinary team meetings. *Translational andrology and urology, 7*(3), 508.

Singh, S., Eguchi, M., Min, S.-J., & Fischer, S. (2020). Outcomes of patients with cancer discharged to a skilled nursing facility after acute care hospitalization. *Journal of the National Comprehensive Cancer Network, 18*(7), 856-865.

Steinmetz, A. R., Gantz, J., Fiscella, K., & Messing, E. M. (2022). Improving rates of immediate postoperative intravesical chemotherapy with

gemcitabine for low-grade bladder cancer: an implementation analysis. *Urology Practice, 9*(1), 47-55.

Taarnhøj, G. A., Lindberg, H., Johansen, C., & Pappot, H. (2019). Patient-reported outcomes item selection for bladder cancer patients in chemo-or immunotherapy. *Journal of Patient-reported Outcomes, 3*(1), 1-9.

Tan, W. S., & Kelly, J. D. (2018). Intravesical device-assisted therapies for non-muscle-invasive bladder cancer. *Nature Reviews Urology, 15*(11), 667-685.

Yeary, K. H. K., Clark, N., Saad-Harfouche, F., Erwin, D., Kuliszewski, M. G., Li, Q., . . . Zoellner, J. (2022). Cruciferous Vegetable Intervention to Reduce the Risk of Cancer Recurrence in Non–Muscle-Invasive Bladder Cancer Survivors: Development Using a Systematic Process. *JMIR cancer, 8*(1), e32291.