

The Correlation between Decision-Making Conflict and Anxiety-Depression in Prostate Cancer Patients: A Cross-Sectional Study

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Abstract

Objective: To investigate the prevalence of decision-making conflict in prostate cancer patients and its relationship with anxiety and depressive symptoms, as well as to identify independent risk factors for high levels of decision-making conflict. **Methods:** A convenience sampling approach was employed to enroll 251 newly diagnosed prostate cancer patients. Cross-sectional surveys were conducted using a general information questionnaire, Decision Conflict Scale (DCS), Generalized Anxiety Disorder Scale (GAD-7), and Patient Health Questionnaire Depression Scale (PHQ-9). Patients were divided into a low-risk group and a high-risk group based on a DCS score cutoff of 37.5 points. Univariate analysis and binary logistic regression were performed to examine influencing factors of high decision-making conflict. **Results:** Among the 251 patients, the incidence of high decision-making conflict was 31.1% (78/251). Univariate analysis revealed that age, highest educational attainment, marital status, employment status, alcohol consumption, clinical stage of cancer, as well as levels of anxiety and depression were significantly associated with high decision-making conflict ($P < 0.05$). Binary logistic regression identified total depression score ($OR = 1.252$; 95% CI: 1.074 - 1.459; $P = 0.004$) as an independent risk factor for high decision-making conflict, whereas total anxiety score showed no statistical significance ($P > 0.05$). **Conclusion:** Prostate cancer patients exhibit a high prevalence of decision-making conflict. Compared to anxiety, depressive symptoms more specifically predict the risk of high decision-making conflict. Clinical practice should prioritize screening for depressive symptoms and provide targeted decision-making counseling and psychological support.

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Keywords

Prostate Cancer, Decision-Making Conflict, Anxiety, Depression

1. Introduction

Prostate cancer is the most prevalent malignant tumor in the male genitourinary system [1]. With the accelerating aging of China's population and the widespread adoption of prostate-specific antigen (PSA) screening, its detection rate has shown a continuous upward trend. Clinical decision-making for localized prostate cancer exhibits high preference sensitivity. The long-term tumor-specific survival benefits of radical surgery, radiotherapy, and active surveillance are comparable; however, significant differences exist in adverse effects such as urinary incontinence and erectile dysfunction. For patients with locally advanced disease (T3 - T4) or those with undetermined staging at initial diagnosis, a careful balance must be struck among radical treatment, endocrine therapy, and comprehensive intervention regimens regarding survival benefits, functional preservation, and treatment burden. Patients consistently face repeated trade-offs between survival prognosis and quality of life, which frequently leads to decisional conflict [2]-[4]. Decisional conflict [5] refers to a state of internal turmoil arising from information asymmetry, ambiguous values, or insufficient decision support when faced with multiple treatment options; it not only delays treatment progression but also increases the risk of long-term regret and reduces treatment adherence. This study focuses on patients at the decision-making stage for prostate cancer, employing a cross-sectional survey to analyze the prevalence of decisional conflict, explore its correlations with anxiety and depression, identify independent risk factors for high decisional conflict, and provide empirical evidence for implementing targeted psychological interventions and decision support strategies in clinical practice.

2. Subjects and Methods

2.1. Study Subjects

Prostate cancer patients who visited the Department of Urology at Guangdong Provincial Hospital of Traditional Chinese Medicine from September to October 2025 were enrolled. Inclusion criteria included: 1) pathological diagnosis of prostate cancer; 2) being in the treatment decision-making phase, where all participants are newly diagnosed and have not received any prior treatment at enrollment; 3) maintaining clear consciousness. Exclusion criteria included: 1) distant metastasis; 2) severe cognitive or psychiatric disorders. A total of 251 valid questionnaires were collected. This study was approved by the Ethics Committee of Guangdong Provincial Hospital of Traditional Chinese Medicine (Approval No.: ZE2025-360-01), and all patients signed informed consent forms.

2.2. Research Tools

2.2.1. General Information Questionnaire

Designed by the researchers themselves, these variables include age, marital status, educational level, per capita monthly household income, method of medical expense payment, and Clinical Cancer Stage (with Clinical Cancer Stage based on the International Union Against Cancer's TNM classification criteria).

2.2.2. Decision Conflict Scale (DCS)

This scale was developed by O'Connor [6] and translated into Chinese by Wang Lu *et al.* [7]. It consists of three dimensions: information and values, decision support and decision effectiveness, and decision uncertainty, with a total of 16 items. The Likert 5-level scoring system is adopted (0 = strongly agree, 4 = strongly disagree, with question 11 being scored in reverse). Convert the raw score to a standard score ranging from 0 to 100. The higher the score, the more severe the decision-making conflict. A score of less than 25 indicates no decision conflict, while a score of more than 37.5 indicates a high level of decision conflict. In this study, the Cronbach's α coefficient of this scale was 0.831.

2.2.3. Generalized Anxiety Scale (GAD-7)

Compiled by Spitzer *et al.* [8], it consists of 7 items and is scored from 0 to 3 points, with a total score ranging from 0 to 21 points. A score of ≥ 5 indicates mild anxiety, while a score of ≥ 10 indicates moderate to severe anxiety. In this study, the Cronbach's α coefficient of this scale was 0.85.

2.2.4. Patient Health Questionnaire Depression Scale (PHQ-9)

This scale was developed by Kroenke *et al.* [9] and consists of 9 items. It is scored on a scale of 0 to 3, with a total score ranging from 0 to 27. A score of ≥ 5 indicates mild depression, and ≥ 10 indicates moderate to severe depression. The Cronbach's α coefficient of this scale is 0.87.

2.3. Statistical Methods

Data analysis was completed using SPSS27.0 statistical software. The measurement data were expressed as mean $\pm$ standard or median (quartile), and the Mann-Whitney U rank sum test was used for comparison between the two groups. Counting data were expressed as n (%), and the χ^2 test was used for comparison between groups. Correlation analysis was conducted using Spearman's rank correlation analysis; Using the occurrence of high decision conflict as the dependent variable (high decision conflict = 1; non-high decision conflict = 0), statistically significant variables identified in the univariate analysis were included in a binary logistic regression model. All categorical variables were entered as dummy variables, with reference groups defined as follows: age (<65 years), highest education level (primary school or below), marital status (widowed), employment status (employed), alcohol consumption (never drinking), and cancer clinical stage (T1 stage); total anxiety scores and total depression scores were included directly as

continuous variables. Prior to model inclusion, multiple collinearity tests were performed using the variance inflation factor (VIF) and tolerance criteria, with $VIF < 5$ and tolerance > 0.2 serving as thresholds for no significant collinearity, thereby eliminating potential interference from collinearity on regression results. A difference was considered statistically significant when $P < 0.05$.

3. Results

3.1. General Information and Results of the Research Subjects

A total of 251 tumor patients were included in this study, among whom 82.07% were aged 65 or above. The educational attainment was mainly junior high school (29.88%) and senior high school/technical secondary school (26.69%). The marital status was mostly married or cohabiting (89.24%). The employment status is mainly composed of retirees (88.45%). The proportion of families with an annual income of less than 100,000 yuan is 47.81%. Among smoking statuses, former smokers accounted for the highest proportion (44.62%). The majority of those who drink alcohol do not drink at all (58.96%). The tumor stages T2, T4 and unclear accounted for a relatively high proportion, which were 20.72%, 20.72% and 40.64%, respectively. Patients whose staging has been marked as “unknown” primarily include those who have not completed the full set of imaging-based staging examinations after initial pathological diagnosis, or those who first visited our hospital following a biopsy diagnosis at another institution and have not yet undergone comprehensive systematic staging evaluation; thus, their clinical T-stage cannot be determined at this stage. For details, please refer to **Table 1**.

Table 1. Demographic sociological characteristics of the research subjects.

Variable	Groups	Number	%
Age	<65 years	45	17.93
	≥65 years	206	82.07
Education	Primary school and below	49	19.52
	Junior high school	75	29.88
	Senior high school/Technical secondary school	67	26.69
	College and above	60	23.90
Marital Status	Unmarried	3	1.20
	Married/Cohabiting	224	89.24
	Divorced/Separated	6	2.39
	Widowed	18	7.17

Continued

Employment Status	Employed	7	2.79
	Freelancer	9	3.59
	Retired	222	88.45
	Unemployed	10	3.98
	Others	3	1.20
Annual Family Income	<100,000 yuan	120	47.81
	100,000 - 200,000 yuan	83	33.07
	200,000 - 400,000 yuan	36	14.34
	>400,000 yuan	12	4.78
Smoking Status	Never smoked	104	41.43
	Current smoker	35	13.94
	Former smoker	112	44.62
Drinking Status	Never drink	148	58.96
	Occasional drinking	61	24.30
	Intermittent drinking	21	8.37
	Frequent drinking	17	6.77
	Daily drinking	4	1.59
Clinical Cancer Stage	T1	18	7.17
	T2	52	20.72
	T3	27	10.76
	T4	52	20.72
	Unknown	102	40.64

3.2. Decision-Making Conflicts and the Current Situation of Anxiety and Depression in Prostate Cancer Patients

The total score standard of decision conflict for this group of patients was 34.69 ± 19.33 points. The scores of each dimension were similar. The dimension of information and values (35.99 ± 19.57) was slightly higher, and the dimension of decision uncertainty (34.56 ± 21.81) had a slightly greater degree of dispersion, suggesting that the overall decision conflict was at a medium level, and individual differences were relatively obvious. See **Table 2**.

Table 2. Scores of the decision conflict scale for cancer patients.

Item	Number of Items	Raw Total Score	Standard Score
Total score of decisional conflict	16	22.20 ± 12.37	34.69 ± 19.33
Information and values	6	8.64 ± 4.70	35.99 ± 19.57
Decision support and decision effectiveness	8	10.80 ± 6.35	33.75 ± 19.85
Decision uncertainty	2	2.76 ± 1.74	34.56 ± 21.81

Among the patients, the proportion of those without anxiety was the highest, reaching 52.59%, while the proportions of those with mild and moderate to severe anxiety decreased successively. The overall depressive mood was mainly non-depressive, accounting for 70.52%. Among the people with depressive mood, the proportion of severe depression was relatively high, while the detection rates of mild, moderate and moderate-severe depression were relatively low. It can be seen that the detection rate of anxiety in the research subjects was higher. Severe depression was the main prominent manifestation of depressive mood, as shown in **Table 3**.

Table 3. Scores of the anxiety and depression scale for prostate cancer patients.

Variable	Grouping	n (%)
Anxiety	No anxiety	132 (52.59)
	Mild anxiety	66 (26.29)
	Moderate-severe anxiety	53 (21.12)
Depression	No depression	177 (70.52)
	Mild depression	20 (7.97)
	Moderate depression	7 (2.79)
	Moderate-severe depression	11 (4.38)
	Severe depression	36 (14.34)

3.3. Correlation Analysis of Anxiety, Depression and Decision Conflict

Spearman correlation analysis showed that the total scores of anxiety and depression were significantly positively correlated with the total score of decision conflict ($r_s = 0.631, 0.677$, both $P < 0.001$), indicating that the more severe the anxiety and depression of the patients, the higher the level of treatment decision conflict, as shown in **Table 4**.

Table 4. Correlation analysis of anxiety, depression and decision conflict in prostate cancer patients.

Variable	Total Score of Decisional Conflict	
	r_s	P
Total anxiety score	0.631	<0.001
Total depression score	0.677	<0.001

3.4. Results of Univariate Analysis of Decision-Making Conflicts in Prostate Cancer Patients

The level of decision conflict was divided into the high decision conflict group and the non-high decision conflict group with a critical value of 37.5. The results of univariate analysis showed that there were statistically significant differences in age, highest educational attainment, marital status, employment status, alcohol consumption, clinical stage of cancer, and levels of anxiety and depression between the two groups (all $P < 0.05$). However, there was no statistically significant difference in annual household income and smoking status between the two groups ($P > 0.05$). The high decision-making conflict group is characterized by lower age, lower educational attainment, higher rates of divorce/separation and widower, higher rates of non-retirement and alcohol consumption, higher rates of advanced tumors, and more severe anxiety and depression, as shown in **Table 5**.

Table 5. Univariate analysis of decision-making conflicts in prostate cancer patients.

Variable	Non-high Decisional Conflict Group (n = 173)	High Decisional Conflict Group (n = 78)	X^2/z	P
Age (%)			10.276	0.001
<65 years	22 (12.72)	23 (29.49)		
≥65 years	151 (87.28)	55 (70.51)		
Highest Educational Level (%)			10.034	0.018
Primary school and below	28 (16.18)	21 (26.92)		
Junior high school	46 (26.59)	29 (37.18)		
Senior high school/Technical secondary school	52 (30.06)	15 (19.23)		
College and above	47 (27.17)	13 (16.67)		
Marital Status (%)			11.577	0.009
Unmarried	2 (1.16)	1 (1.28)		
Married/Cohabiting	161 (93.06)	63 (80.77)		
Divorced/Separated	1 (0.58)	5 (6.41)		
Widowed	9 (5.20)	9 (11.54)		

Continued

Employment Status (%)			50.422	<0.001
Employed	3 (1.73)	4 (5.13)		
Freelancer	0 (0.00)	9 (11.54)		
Retired	169 (97.69)	53 (67.95)		
Unemployed	1 (0.58)	9 (11.54)		
Others	0 (0.00)	3 (3.85)		
Annual Family Income (%)			7.081	0.069
<100,000 yuan	90 (52.02)	30 (38.46)		
100,000 - 200,000 yuan	57 (32.95)	26 (33.33)		
200,000 - 400,000 yuan	20 (11.56)	16 (20.51)		
>400,000 yuan	6 (3.47)	6 (7.69)		
Smoking Status (%)			2.332	0.312
Never smoked	70 (40.46)	34 (43.59)		
Current smoker	28 (16.18)	7 (8.97)		
Former smoker	75 (43.35)	37 (47.44)		
Drinking Status (%)			65.39	<0.001
Never drink	115 (66.47)	33 (42.31)		
Occasional drinking	51 (29.48)	10 (12.82)		
Intermittent drinking	4 (2.31)	17 (21.79)		
Frequent drinking	2 (1.16)	15 (19.23)		
Daily drinking	1 (0.58)	3 (3.85)		
Clinical Cancer Stage (%)			37.074	<0.001
T1	10 (5.78)	8 (10.26)		
T2	30 (17.34)	22 (28.21)		
T3	13 (7.51)	14 (17.95)		
T4	28 (16.18)	24 (30.77)		
Unknown	92 (53.18)	10 (12.82)		
Total anxiety score	0 (0.7)	13 (7.18)	-9.567	<0.001
Total depression score	0 (0.4)	18 (4.24)	-10.555	<0.001

3.5. Binary Logistic Regression Analysis of Influencing Factors of Decision-Making Conflicts in Cancer Patients

The multicollinearity test prior to inclusion in the regression model revealed that all variables had VIF values <3 and tolerance coefficients >0.3. Specifically, the VIF values for the total anxiety score and total depression score were 2.14 and 2.09, respectively, both significantly below the critical threshold of 5, indicating no significant multicollinearity among the variables. Thus, the selection of model variables was appropriate. The univariate meaningful variables were included in the binary Logistic regression. The results showed that the total score of depression was an independent risk factor for decision conflict (OR = 1.252, 95%CI: 1.074 - 1.459, P = 0.003). Age, educational background, marriage, employment, alcohol consumption, tumor stage and total anxiety score did not enter the final independent influence model (all P > 0.05), suggesting that depressive mood is the core independent factor affecting the conflict in treatment decisions of tumor patients, as shown in **Table 6**.

Table 6. Binary logistic regression analysis of the influencing factors of decision-making conflicts in cancer patients.

Variable	B	SE	Wald	P	OR	95%CI		Collinearity diagnostics	
						Lower	Upper	Tolerance	VIF
Age	0.989	0.844	1.376	0.241	2.690	0.515	14.055	0.831	1.204
Highest Educational Level								0.915	1.093
Primary school and below					1.000				
Junior high school	0.048	0.632	0.006	0.94	1.049	0.304	3.624		
Senior high school/Technical secondary school	-0.221	0.659	0.113	0.737	0.801	0.220	2.918		
College and above	-0.204	0.675	0.092	0.762	0.815	0.217	3.058		
Marital Status								0.945	1.058
Widowed					1.000				
Unmarried	-	-	-	-	-	-	-		
Variable	-0.015	0.813	0.000	0.985	0.985	0.200	4.851		
Age	2.042	2.265	0.813	0.367	7.707	0.091	652.684		
Highest Educational Level								0.970	1.031
Primary school and below					1.000				
Junior high school	-	-	-	-	-	-	-		
Senior high school/Technical secondary school	0.172	1.874	0.008	0.927	1.187	0.030	46.715		

Continued

College and above	0.442	2.503	0.031	0.860	1.556	0.012	209.954		
Marital Status	-	-	-	-	-	-	-		
Widowed								0.628	1.593
Unmarried					1.00				
Variable	-1.241	0.634	3.833	0.051	0.289	0.083	1.001		
Age	1.033	1.098	0.884	0.347	2.808	0.326	24.161		
Highest Educational Level	0.756	1.237	0.373	0.541	2.129	0.189	24.037		
Primary school and below	1.808	1.588	1.296	0.255	6.098	0.271	137.09		
Junior high school								0.793	1.260
Senior high school/Technical secondary school					1000				
College and above	-0.889	1.166	0.581	0.446	0.411	0.042	4.042		
Marital Status	0.392	1.154	0.115	0.734	1.480	0.154	14.207		
Widowed	1.322	1.004	1.734	0.188	3.750	0.524	26.814		
Unmarried	-0.217	1.008	0.046	0.829	0.805	0.112	5.802		
Variable	0.022	0.081	0.074	0.786	1.022	0.872	1.198	0.182	3.481
Age	0.224	0.078	8.233	0.004	1.252	1.074	1.459	0.161	4.205

Note: “-” indicates no exact value.

4. Discussion

4.1. Decision-Making Conflicts among Prostate Cancer Patients Are at a Moderate Level

The results of this study show that the total criterion score of decision conflict in 251 prostate cancer patients was (34.69 ± 19.33) points, and the incidence of high decision conflict (DCS > 37.5 points) was 31.1%, which was at a medium level overall and basically consistent with the results of similar studies at home and abroad. The study by Steginga S K *et al.* [10] shows that approximately 63% of prostate cancer patients have moderate to severe decision-making conflicts; Wang *et al.*'s investigation of 192 patients with bladder cancer in the decision-making stage also found that the incidence of high decision conflict was 77.5%, which was similar to the results of this study [11]. This result confirms the high preference sensitivity of prostate cancer treatment decisions: there is no significant difference in 10-year tumor-specific survival rates among the current mainstream regimens such as radical prostatectomy, external radiotherapy, and active monitoring, but there are significant differences in quality of life outcomes such as urinary incontinence, erectile dysfunction, and intestinal adverse reaction [12]. Patients need to make individualized value trade-offs between “survival benefits” and “functional

preservation”, and this dilemma is the core cause of the high incidence of decision-making conflicts.

From the perspective of dimension scores, the scores of the information and values dimension are relatively the highest, suggesting that the asymmetry of disease information and the ambiguity of personal value orientation are the main sources of decision-making conflicts. The diagnosis and treatment of prostate cancer involve a large number of professional medical terms and risk probability information, making it difficult for ordinary patients to accurately understand the long-term outcomes of different regimens. Meanwhile, the treatment outcome is highly bound to male self-identity and quality of life. Most patients have not established a clear value ranking in the early stage of diagnosis, which further aggravates the decision-making predicament. In addition, the degree of dispersion of the decision-making uncertainty dimension is the greatest, reflecting that there are significant individual differences in the decision-making adaptability of different patients, providing a target for the implementation of stratified intervention in clinical practice.

4.2. The Differentiated Impact of Depression and Anxiety on Decision-Making Conflicts

The core finding of this study is that after controlling for confounding factors such as demographic characteristics, disease stage, and lifestyle habits, depression is an independent risk factor for high decision conflict in prostate cancer patients (OR = 1.252, 95% CI: 1.074 - 1.459), while the independent effect of anxiety is not statistically significant. Previous studies have mostly combined anxiety and depression as “psychological distress” for overall analysis, masking the differences in their effects. This study, however, has clarified the specific predictive value of depression in decision-making conflicts, suggesting that there are essential differences in the mechanisms by which the two emotional states affect the decision-making process.

Spearman correlation analysis shows that both anxiety and depression are significantly positively correlated with the total score of decision conflict, which is consistent with the conclusions of most previous studies [11] [13], indicating that the higher the degree of emotional distress, the more severe the decision conflict. However, when included in the multivariate logistic regression model, anxiety’s independent effect became insignificant, suggesting that depression may serve as a key mediating variable linking anxiety and decision conflict. As no formal mediation test was conducted in this study, it remains uncertain whether anxiety’s impact on decision conflict is fully mediated by depression; the exact pathway of interaction and causal direction require further validation through longitudinal studies and mediation analyses. From the perspective of psychopathology, the core of anxiety is excessive worry about the uncertainty of the future, which is a common emotional response in the stage of cancer diagnosis [14]. For newly diagnosed prostate cancer patients, regardless of the level of decision-making con-

flicts, concerns about tumor progression and treatment side effects are widespread. Therefore, anxiety is more of an accompanying baseline emotion and it is difficult to specifically distinguish the severity of decision-making conflicts.

In contrast, depression has an independent predictive effect on decision-making conflicts. The core symptoms of depression include anhedonia, reduced energy, a sense of hopelessness, and decreased cognitive flexibility, which can impair decision-making ability through multiple pathways. First, individuals in a depressive state have negative cognitive biases, tend to magnify the risks and negative outcomes of treatment plans, and find it difficult to objectively weigh the pros and cons of different plans, thus falling into a decision-making dilemma [15]. Secondly, the energy exhaustion and decision-making fatigue accompanied by depression will intensify self-depletion, reduce the patient's ability to process and integrate information, making it impossible for them to effectively handle complex diagnostic and therapeutic information, and eventually lead to "decision paralysis" [16]. Thirdly, the treatment decisions for prostate cancer involve choices that are highly related to male identity, such as sexual function and urination function. When patients are constantly struggling between "saving their lives" and "maintaining the quality of life", they are very likely to feel helpless and have a sense of worthlessness, which in turn aggravates depressive moods and forms a vicious cycle.

4.3. Analysis of the Roles of Other Relevant Factors

Univariate analysis showed that age, educational background, marital status, employment status, frequency of alcohol consumption, and clinical stage of cancer were all associated with high decision conflict. However, none of the above factors became independent risk factors in the multivariate analysis, suggesting that depression may play a significant role in the association between these demographic, behavioral, and clinical factors and decision conflict.

In terms of alcohol consumption frequency, the proportion of patients in the high decision-making conflict group who drink alcohol is significantly higher. When facing difficult treatment predicaments and accompanying negative emotions, some patients will drink alcohol to relieve psychological pain and avoid decision-making pressure. At the same time, long-term alcohol consumption may also damage the cognitive function and emotional regulation ability of the prefrontal lobe, further reducing decision-making efficiency and forming a mutually reinforcing cycle. However, after controlling for the level of depression, the effect of alcohol consumption was no longer significant, suggesting that depression may serve as a key intermediate variable in the association between alcohol intake and decision-making conflict. This inference is based solely on indirect evidence from multivariate regression results and has not been validated by standardized mediation analysis; the causal pathways and underlying mechanisms between these factors require further investigation.

In terms of disease staging, patients with T3 and T4 stages exhibited a higher

prevalence of decision-making conflict, which correlates with more complex treatment regimens and greater prognostic uncertainty in advanced-stage patients. However, installment payments were also excluded from the regression equation, suggesting that the impact of disease severity and demographic characteristics on decision-making conflict may partially operate through depressive mood. This mechanistic hypothesis requires further validation in subsequent studies. Among demographic characteristics, younger age, lower education levels, divorce/widowed status, and non-retired status were associated with higher decision-making conflict: younger patients demonstrated stronger demands for preserving sexual and social functioning, leading to more intense psychological conflicts during decision-making trade-offs; patients with lower education levels exhibited relatively poorer health literacy and weaker comprehension of medical information, resulting in more pronounced information asymmetry; patients with poor marital status or remaining employed faced greater pressures from family and social roles, accompanied by heightened decision-making concerns [17] [18]. Nevertheless, these demographic factors' effects were attenuated in the multivariate model, further indicating that emotional factors—particularly depression—are the core intrinsic drivers of decision-making conflict.

4.4. Clinical Practice Implications

The results of this study have clear guiding value for clinical decision support in prostate cancer. Firstly, depression screening should be incorporated into the routine assessment process before treatment decision-making, and simple scales such as PHQ-9 should be used to quickly identify high-risk patients. For patients with high depression scores, clinical medical staff should not urge them to make treatment choices immediately. Instead, they should first collaborate with psychological specialists for emotional intervention. After the depressive symptoms are relieved and cognitive functions recover, decision-making counseling should be gradually provided to prevent patients from making hasty and regretful decisions in a state of emotional exhaustion.

Secondly, the decision support model should transform from information notification to value clarification. This study shows that the dimensions of information and values are the core sources of decision-making conflicts, and patients with depression often have a sense of ambiguous values and hopelessness. Specialist nurses or decision counselors can guide patients through one-on-one structured interviews to sort out their core personal demands, such as prioritizing survival time, prioritizing the preservation of sexual function, and prioritizing the avoidance of urinary incontinence, etc. This helps patients screen out plans that meet their own wishes within a clear value framework and reduce self-consumption in their hearts.

In addition, for high-risk groups with high alcohol consumption frequency, advanced tumors, and insufficient social support, a multi-disciplinary collaborative decision support system should be established. The urology department, psychol-

ogy department, and nursing team should jointly intervene, starting from multiple dimensions such as emotion regulation, disease popularization, and social support, to reduce the level of decision-making conflicts for patients and improve the quality of decision-making.

4.5. Research Limitations

This study has certain limitations. First, the research is a cross-sectional design, which can only reveal the correlations among variables but cannot clarify the causal sequence and direction of action between depression and decision-making conflicts. In the future, longitudinal tracking studies can be conducted to explore the dynamic impact of depressive emotions on the decision-making process, decision satisfaction, and decision regret. Second, the absence of clinical staging information for some patients in this study may underestimate the true effect size of disease stage on decision-making conflicts, thereby affecting the stability of multivariate logistic regression results to some extent. Third, although the sample included patients with different clinical stages and those with undetermined initial diagnosis stages during the decision-making period, no stratified subgroup analysis was conducted based on staging; thus, the findings are more applicable to the overall population of prostate cancer patients at the initial diagnosis stage, while their specificity in specific prostate cancer subgroups requires further validation through stratified studies.

Author Contributions

Jiayu Gong: Conceptualization, investigation, methodology. **Yangyang Liao:** Conceptualization, formal analysis, methodology, writing—original draft, Writing—review & editing. All authors had full access to all the data in the study, and the corresponding author had final responsibility for the decision to submit for publication. The corresponding author attests that all listed authors meet authorship criteria and that no others meeting the criteria have been omitted.

Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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