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The Relationship Between Spiritual Well-Being and Psychosocial Adjustment in Taiwanese Patients With Colorectal Cancer and a Colostomy

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PURPOSE: We examined relationships among demographic and clinical characteristics, spiritual well-being, and psychosocial adjustment in Taiwanese patients with colorectal cancer and a colostomy.

DESIGN: A descriptive, cross-sectional, exploratory study design was used to answer research questions.

SUBJECTS AND SETTING: Participants were recruited from the outpatient ambulatory clinic in the gastrointestinal surgical department at the medical center of National Taiwan University. Forty-five Taiwanese patients aged 42 to 83 years who were diagnosed with colorectal cancer and underwent colostomy surgery participated in the study.

METHODS: Participants completed a personal data questionnaire designed for this study, along with 2 validated instruments, the Spiritual Well-Being Scale and the Psychosocial Adjustment to Illness Scale–Self Report.

FINDINGS: Forty-five persons participated in the study; 69% reported a moderate level of spiritual well-being. Participants reported strong adjustment to extended family relationships, but poor adjustment in sexual relationships. Spiritual well-being was significantly associated with psychosocial adjustment ($r = -0.52$, $P < .01$), and 4 predictors (income change after surgery, self-rated disease severity, time since surgery, and spiritual well-being) accounted for 53% of the variance in psychosocial adjustment.

CONCLUSIONS: Spiritual well-being plays an important role for Taiwanese patients when faced with psychosocial adjustment related to life with colorectal cancer and a colostomy.

Introduction

Surgery remains a mainstay of treatment for colorectal cancer (CRC). Other treatments for CRC, such as biotherapy, chemotherapy, and radiotherapy, are painful and burdensome and have side effects.[1-3] Nevertheless, the diagnosis, surgical reconstruction, and adjuvant treatments required for management of CRC exert negative effects on body image, psychological well-being, sexual function, and quality of life.[4-6] Moreover, patients with CRC who require creation of a colostomy must also learn to cope with alterations in fecal elimination and physical appearance, and these dramatic changes impact physical and psychological function.[5]

Spirituality is an integrative force that influences physical and mental status, thoughts, and behaviors.[7] It is embedded in the person and shaped by the cultural background.[8] Among modern Taiwanese people, Confucianism is the predominant belief system, and Buddhism and Taoism are 2 major religions.[9] Confucianism places a high value on harmony and peace that can be achieved if everybody upholds 5 principles of relationships with basic responsibilities in society. They are (1) ruler and subject (government and citizen), (2) parent and child, (3) husband and wife, (4) older sibling and younger sibling, and (5) friend and friend.[10] Taoism consists of "being" and "nonbeing" in production and destruction.[11] Taoists believe that retribution or misfortune causes illness or death. They believe that retribution is related to negative behaviors or episodes of the current family or of previous generations.[12] Buddhists believe that "life is a boundless sea of suffering" and that the purpose of engaging in religious practice is to "end suffering and gain happiness."[13(p76)]

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Researchers have demonstrated that spirituality is an internal and valuable resource in coping with cancer in that it facilitates psychological adjustment and improves quality of life.[14-16] Further, studies have shown that spiritual well-being accounted for 53% of the variance in quality of life among 40 patients with leukemia,[15] and psychosocial adjustment explained 18% of the variance in quality of life in a group of 119 persons with CRC and a colostomy.[17] However, few studies have explored the relationship between spiritual well-being and psychosocial adjustment in Taiwanese patients with a colostomy resulting from CRC.

Literature Review

Spiritual well-being is defined as having 2 dimensions: vertical and horizontal.[18] The religious (vertical) dimension involves "a sense of well-being in relation to God," and the existential horizontal dimension involves "a sense of meaning and purpose and satisfaction with life" without reference to religion.[7(p331)] O'Connor and colleagues[15] demonstrated that spiritual well-being had significantly negative relationships with fatalism, hopelessness, helplessness, and anxious preoccupation. Researchers have also reported that the existential dimension has more powerful relationships than the religious dimension with higher levels of quality of life, lower-level demands related to one's illness, less uncertainty, more positive mood states, and better psychosocial adjustment.[14,19-22]

Psychosocial adjustment includes interactive cognitive, behavioral, and emotional responses.[23] Adaptation is not a step-by-step process; rather, it is a continuous appraisal and reappraisal adjustment process that ultimately aims for adaptation to a chronic illness.[24] Psychosocial adjustment to cancer involves managing multiple changes associated with a diagnosis of cancer and its treatment including surgery, chemotherapy, and radiotherapy.[25,26] Sexual function, body image, side effects from chemotherapy, social function, and marital adjustments are significantly worse in patients requiring a colostomy as compared to those without an ostomy,[27,28] Engel and colleagues[29] conducted a 4-year prospective study and found that sexual function scores were consistently low in patients with a stoma. In addition, patients with CRC and an ostomy reported depression following surgery more frequently than did persons without an ostomy.[5]

Spiritual Well-Being and Psychosocial Adjustment

Spiritual well-being can facilitate patients' healing and recovery by enhancing their inner strength, comfort, peace, wellness, wholeness, and coping abilities and by alleviating depressive symptoms, promoting mental health, increasing energy, and decreasing cancer-related distress.[30-32] Furthermore, research suggests that spiritual well-being, including faith and meaning, acts as an important variable in predicting the ease of adjustment to life with cancer.[16,32] In addition, demographic and disease characteristics such as age, income, years in a relationship, stage at the time of diagnosis, performance status, and spiritual well-being are also important factors related to psychosocial adjustment.[22,33-36] Therefore, the purposes of this study were to explore the relationships among demographic and clinical characteristics, spiritual well-being, and psychosocial adjustment. This study also examined the contributions of these characteristics and the spiritual well-being of Taiwanese patients as predictors of psychosocial adjustment following CRC surgery and creation of a colostomy.

Methods

A cross-sectional, correlational, exploratory design was used to answer research questions. A convenience sample comprised of 45 Taiwanese patients (23 males and 22 females) with an ostomy associated with CRC. Subjects were recruited from patients cared for at the Medical Center of National Taiwan University in Taipei. We focused on patients with an ostomy based on results of several studies that found that patients with CRC and a colostomy experience more adjustment problems than patients without a colostomy.[27,28] Exclusion criteria were less than 18 years or acute life-threatening illness. Participants were required to have the ability to read and write in Mandarin and to complete study forms independently.

Study Procedures

Data collection occurred from February to May 2006, at National Taiwan University Hospital. Study designs and procedures were approved by the institutional review board of National Taiwan University and its hospital. Potential participants were provided information about the study when they visited their physicians at the Gastrointestinal Surgical Department. Participants indicated their interest in the study by contacting the researcher, and they were asked to complete 3 questionnaires. Data collection procedures were designed to protect the confidentiality of participants.

Instruments

Data pertaining to demographic and clinical characteristics were obtained from patients and their registry enrollment forms; this form included 14 items constructed by the investigator. Data regarding age, gender, marital status, education level, monthly household income, religious commitment, frequency of religious practice, employment after surgery, and change of income after surgery were used to describe the sample. Clinical characteristics included type of cancer, adjuvant treatment, type of colostomy, time since surgery, and self-rated disease severity.

The Chinese version of the Spiritual Well-Being Scale (SWBS) was used to measure spiritual well-being.[37] This instrument comprises 20 items incorporating a 6-point Likert scale. The SWBS yields 2 subscales: religious well-being (RWB) and existential well-being (EWB). Religious well-being is assessed via 10 items designed to explore the participants' relationship with God, and the other 10 items assessed their EWB, referring to life's purpose and satisfaction.[38] Reliability and validity of the SWBS have been established.[7,38,39] The Cronbach α's for the Chinese version of the SWBS, RWB, and EWB in the study of 90 Taiwanese patients with lung cancer were 0.90, 0.92, and 0.87, respectively.[37] In the current study, the Cronbach α for the total SWBS was 0.94; the Cronbach α's for the RWB subscale and the EWB subscale were 0.95 and 0.93, respectively.

The Chinese version of the Psychosocial Adjustment to Illness Scale–Self Report (PAIS-SR) was used to examine various dimensions of psychosocial adjustment.[40] This multiple-choice questionnaire has 46 items that measure 7 domains, including health care orientation, vocational environment, domestic environment, sexual relationship, extended family relationship, social environment, and psychological distress. Scores from all 7 domains were totaled to reflect the patients' psychosocial adjustment to the illness; higher scores indicate more adjustment problems.[41]

Reliability and validity of the PAIS-SR have been supported by multiple studies involving cancer patients, including participants with CRC.[16,26,42] The Cronbach α's for the 7 subscales vary from 0.63 to 0.87 among patients with renal dialysis[42]; furthermore, Derogatis[42] showed that the PAIS demonstrated good convergent and predictive validity. Regarding the reliability of the Chinese version of the total PAIS-SR, the Cronbach α was 0.90.[40] In this current study, the Cronbach α for the total scale was 0.93, and Cronbach α's for the subscales were from 0.67 to 0.93.

Data Analysis

Data analysis was performed with SPSS for Windows, version 16.0 (SPSS Inc, Chicago, Illinois). Descriptive statistics were used to describe the demographic and clinical characteristics of patients and the SWBS and the PAIS-SR scores. Bivariate Pearson product-moment correlations between the SWBS and the PAIS were analyzed. Hierarchical regression analysis was performed to determine how much of the variance in the PAIS-SR was accounted for by the demographic-disease variables and the SWBS.

Results

The mean age of the 45 participants was 62.87 ± 11.46 years (mean ± SD). Most (95.6%) reported a religious affiliation. At the time of the study, participants had lived with a colostomy for an average period of 25.04 ± 34.48 months. Rectal cancer (77.8%) was the predominant diagnosis, and 71.1% of the participants had a permanent colostomy. Demographic and clinical characteristics are presented in Table 1.

Scores from SWBS instrument are summarized in Table 2. The mean SWB score was 84.43 ± 21.04, and 69% of respondents reported moderate levels of spiritual well-being, with scores clustered between 41 and 99. Frequencies indicated that 61.9% of religious well-being scores and 59.5% of existential well-being scores were classified as moderate (range, 21–49). Religious well-being scores were significantly higher in participants with a religion commitment Q11 (42.95 ± 12.11) as compared to respondents without a religious affiliation (25.00 ± 21.21, $t = -2.00$, $P = .05$). Analysis also revealed a significantly positive relationship between income and existential well-being score ($r = 0.33$, $p < .05$). Self-rated disease severity was negatively associated with spiritual well being scores ($r = -0.31$, $p < .05$) and existential well-being ($r = -0.35$, $p < .05$).

Psychosocial Adjustment

Raw score sums are the total PAIS and subscales are also summarized in Table 2. Mean PAIS scores were 43.61 ± 21.60. Adjustment to extended family relationships scores were highest, and adjustment to sexual relationship scores were lowest. Overall PAIS scores were significantly higher in participants who experienced income loss after surgery (mean 50.28 ± 20.65) when compared to participants who did not experience an income change (mean = 33.72 ± 19.55, $t = 2.28$, $P < .05$). A statistically significant and inverse proportional relationship was found between time since surgery and overall PAIS scores ($r = -0.47$, $P < .01$). Self-rated disease severity was found to have a direct proportional relationship with PAIS scores ($r = 0.48$, $p < .01$).

Spiritual Well-Being and Psychosocial Adjustment

Statistical analysis revealed a number of significant correlations among the SWBS, the PAIS, and their subscales (Table 3). The SWBS and summed PAIS scores had an inverse proportional relationship ($r = -0.52$, $P < .01$). Existential well-being was strongly correlated with the overall PAIS score ($r = -0.75$, $P < .001$) and with each subscale score of the PAIS except health care orientation adjustment. Religious well-being was not significantly related to the overall PAIS score ($r = -0.05$, $P = .76$) or any subscale scores of the PAIS.

A hierarchical regression analysis was completed to determine whether spiritual well-being explained variance in psychosocial adjustment after controlling for demographic and clinical characteristics (Table 4). The model consisted of 2 steps: demographic and clinical variables were entered first, followed by the spiritual well-being variable. Only those demographic-disease variables significantly correlated with the outcome of psychosocial adjustment were entered in the regression model. This analysis was based on the responses of the 30 participants who answered all questions completely. Given the PAIS

TABLE 1.

Demographic and Disease Characteristics (N = 45)

Variable	Mean (SD)	Range
Age	62.87 (11.46)	42–83
Time since surgery (months)	25.04 (34.48)	2–204
	n	%
Gender		
Male	23	51.1
Female	22	48.9
Education		
Junior school or less	27	60.0
High school or more	18	40.0
Marital status		
Single/divorced/separated/widow/widower	10	22.2
Married	35	77.8
Income per month (New Taiwanese dollars)		
Less than NT 30,000	18	40.9
More than NT 30,001	26	59.1
Religion		
None	2	4.4
Buddhism	14	31.1
Taoism (Folk Religion)	23	51.1
Christianity	4	8.9
Other	1	2.2
Employment status after surgery		
None/retired before surgery	20	44.4
Returning to the original job	7	15.6
Changing job	4	8.9
Stop working	14	31.1
Income change after surgery		
Yes	21	46.7
Increase of expenses after surgery		
Yes	43	95.6
Type of cancer		
Colon cancer	8	17.8
Rectal cancer	35	77.8
Sigmoid cancer	2	4.4
Type of colostomy		
Temporal colostomy	13	28.9
Permanent colostomy	32	71.1
Adjuvant treatment		
None	11	24.4
Only chemotherapy	19	42.2
Only radiotherapy	1	2.2
Chemotherapy and radiotherapy	14	31.1
Self-rated disease severity		
Not severe	27	60.0
A little severe	8	17.8
Severe/very severe	10	22.2

(*continues*)

TABLE 1.

Demographic and Disease Characteristics (N = 45) (*Continued*)

score as a dependent variable, the overall model was significant $F_{4,25} = 7.02$, $P = .001$), and the total R^2 was 0.53. Spiritual well-being explained the unique significant variance in PAIS ($\Delta R^2 = 0.08$, $P < .05$) and was the strongest predictor ($\beta = -0.32$, $P < .05$) in the final model.

Discussion

Participants in this study reported moderate levels of spiritual well-being, existential well-being, and religious well-being. Our results were lower than those reported in previous studies using older patients with cancer, general patients with cancer, and women with breast cancer.[21,43,44] However, Fernsler and colleagues[20] reported a mean score on the spiritual well-being scale (mean = 83 ± 20.9) in 121 patients with CRC, which is similar to the results of this study. We hypothesize that these findings are primarily attributable to heterogeneity in the various studies identified. Research also suggests that spiritual well-being is associated with not only physical and psychological statuses but also cultural background.[7,8] Taoism (51%) and Buddhism (31%) were the 2 major religious affiliations among our participants. In contrast, other researchers enrolled persons who reported affiliations with Christian denominations.[20,21,43,44]

As anticipated, participants reporting a religious affiliation reported significantly higher religious well-being, while existential well-being scores did not differ when compared to persons reporting no religious affiliation. This finding is supported by Fernsler and associates,[20] who found that participants with a Christian religious affiliation had significantly higher religious well-being scores than did respondents who reported no religious affiliation.[20]

We also found a direct proportional relationship between income and existential well-being; respondents with higher incomes tended to have better existential well-being scores. This finding is consistent with Edmondson and coworkers.[14] We found that participants who rated their disease as severe were more likely to have worse spiritual and existential well-being, but we identified no previous studies reporting this relationship. We did retrieve 1 study that suggested that being in an earlier stage of disease was related to higher levels of spirituality.[16] However, their findings cannot be compared to ours because self-rated disease severity is subjective, as it is determined according to the participants' own feelings, and the

TABLE 2.

Levels of SWBS and PAIS and Their Subscales (N = 45)

Scale	n	Possible Range	Actual Range	Median	Mean	SD
Spiritual Well-Being	42	20-120	28-120	86.00	84.43	21.04
Religious well-being	42	10-60	10-60	40.00	42.10	12.86
Existential well-being	42	10-60	13-60	44.50	42.33	12.45
Psychological Adjustment	34	0-138	6-92	43.50	43.61	21.60
PAIS 1	45	0-24	0-14	5.00	5.42	3.73
PAIS 2	45	0-18	0-15	6.00	6.63	4.45
PAIS 3	45	0-24	1-24	5.97	7.06	5.12
PAIS 4	34	0-18	0-18	9.00	9.00	4.72
PAIS 5	45	0-15	0-11	3.00	3.53	3.12
PAIS 6	44	0-18	0-18	8.00	7.55	5.79
PAIS 7	44	0-21	0-21	5.00	5.84	4.90

Abbreviations: PAIS, Psychosocial Adjustment to Illness Scale; PAIS 1, Health Care Orientation; PAIS 2, Vocational Environment; PAIS 3, Domestic Environment; PAIS 4, Sexual Relationships; PAIS 5, Extended Family Relationships; PAIS 6, Social Environment; PAIS 7, Psychological Distress; SWBS, Spiritual Well-Being Scale.

disease stage at diagnosis is objective, as it depends on the physician's assessment. Additional research is needed to explore relationships among self-rated disease severity, disease stage at diagnosis, and spiritual well-being.

We found that sexual relationship adjustment is lower after ostomy surgery. Previous studies have reported that patients with CRC and a stoma had more sexual problems than patients without an ostomy, and especially those who underwent abdominoperineal resection.[4,28,29,45] The abdominoperineal resection operation damages the pelvic autonomic nerves that modulate sexual function in patients, which may, along with the resulting scar and ostomy, influence this finding.[46,47]

In contrast to previous studies,[34,48] we found that income was not related to overall psychosocial adjustment. However, Sideris and coinvestigators[49] reported that patients with an ostomy experienced more financial concerns than patients without a stoma. Participants in our study who reported an income change after colostomy surgery tended to report worse psychosocial adjustment, but 15.6% reported returning to their original jobs after surgery, and 95.6% reported increased expenses. The majority of health care costs and ostomy supplies are covered through our national health insurance.

As anticipated, participants who had been living with their disease for longer periods tended to report better adjustment, and this result is supported by at least 1 previous study.[36] Bekkers and associates[48] conducted a 4-year follow-up study of 59 persons with CRC who are living with an ostomy as compared to 64 persons with CRC and no stoma and found that the presence of an ostomy was associated with no statistically significant psychosocial difficulties after the first postoperative year.

Participants who rated their disease as severe were significantly more likely to have adjustment problems. No previous studies have demonstrated this relationship, so the results cannot be compared. However, Merluzzi and Martinez Sanchez[34] administered the PAIS to 502 persons with cancer, and found that respondents with advanced stage tumors were more likely to report poor adjustment. Therefore, we recommend especially close follow-up for patients who perceive their CRC as severe.

A significant, strong negative relationship was found between spiritual well-being and psychosocial adjustment, indicating that persons with higher levels of spiritual well-being tend to have better psychosocial adjustment to CRC and a colostomy. This finding is consistent with other studies that evaluated this relationship in patients with cancer, hemodialysis, multiple sclerosis, and diabetes.[16,22,33,36] In addition, other researchers report that existential well-being has a stronger association with religious well-being than with overall psychosocial adjustment.[22,33,36] Our findings also indicate that religious well-being was not significantly associated with the overall PAIS score. However, strategies designed to strengthen existential well-being would be expected to facilitate psychosocial adjustment.[32]

Regression analysis suggested that spiritual well-being is a significant component of psychosocial adjustment, accounting for 8% of variance in psychosocial adjustment. Nevertheless, the significant relationships between self-rated disease severity and spiritual well-being strongly suggests that the relationships among these variables are complex and not entirely understood. Lin and Bauer-Wu[50] found that the spiritual well-being of patients with cancer could be enhanced by informing them of the cancer's

TABLE 3.

Correlations Between SWBS, PAIS, and Demographic-Disease Characteristics (N = 45)

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. Income[a]	1.00	−0.16	−0.37[b]	0.28	−0.14	0.33[b]	−0.27	0.19	−0.33[b]	−0.52[d]	−0.36[b]	−0.17	−0.21	−0.42[c]
2. Time since surgery		1.00	−0.18	0.10	−0.02	0.18	−0.47[c]	−0.10	−0.36[b]	−0.20	−0.31	−0.32[b]	−0.31[b]	−0.38[b]
3. Self-rated disease severity			1.00	−0.31[b]	−0.17	−0.35[b]	0.48[c]	0.06	0.66[d]	0.36[b]	0.38[b]	0.17	0.57[d]	0.41[c]
4. SWBS				1.00	0.84[d]	0.83[d]	−0.52[c]	−0.23	−0.42[c]	−0.37[b]	−0.16	−0.20	−0.37[b]	−0.22
5. RWBS					1.00	0.38[b]	−0.05	−0.12	−0.15	−0.07	0.21	0.01	−0.20	0.16
6. EWBS						1.00	−0.75[d]	−0.26	−0.56[d]	−0.55[d]	−0.46[c]	−0.35[b]	−0.42[c]	−0.54[d]
7. PAIS							1.00	0.24	0.84[d]	0.80[d]	0.78[d]	0.68[d]	0.66[d]	0.90[d]
8. PAIS 1								1.00	0.12	0.03	0.04	−0.08	−0.06	0.31[b]
9. PAIS 2									1.00	0.52[d]	0.62[d]	0.36[b]	0.60[d]	0.69[d]
10. PAIS 3										1.00	0.57[d]	0.53[d]	0.51[d]	0.71[d]
11. PAIS 4											1.00	0.55[d]	0.39[b]	0.68[d]
12. PAIS 5												1.00	0.37[b]	0.41[c]
13. PAIS 6													1.00	0.46[c]
14. PAIS 7														1.00

Abbreviations: EWBS, Existential Well-Being Scale; PAIS, Psychosocial Adjustment to Illness Scale; PAIS 1, Health Care Orientation; PAIS 2, Vocational Environment; PAIS 3, Domestic Environment; PAIS 4, Sexual Relationships; PAIS 5, Extended Family Relationships; PAIS 6, Social Environment; PAIS 7, Psychological Distress; RWBS, Religious Well-Being Scale; SWBS, Spiritual Well-Being Scale.

[a] Income: less than 30,000 = 0, more than 30,001 = 1.

[b] $P < .05$.

[c] $P < .01$.

[d] $P < .001$.

TABLE 4.

Hierarchical Regression Analysis of the Predictors of Psychosocial Adjustment (N = 30)

Variables	Step 1 (β)	Step 2 (β)
Income change after surgery[a]	0.18	0.20
Self-rated disease severity	−0.35[b]	−0.30
Time since diagnosis	0.41[b]	0.29
Spiritual well-being		−0.32[b]
R^2	0.45	0.53
Adjusted R^2	0.38	0.45
R^2 change	0.45	0.08
Significance of R^2 change	0.001	0.046

[a] Income change after surgery: yes = 1, no = 0.
[b] $P < .05$.

progression, receiving support from family members and social networks, having self-control abilities, and improving their perceived hope and meaning in life. In addition, strengthening an individual's skills in ostomy care will not only facilitate the development of self-control ability but also accelerate the adjustment period following initial surgery.[51]

Limitations

Our small and homogeneous sample restricts the generalizability of our findings. In addition, our subjects were drawn from a limited geographic area (Taipei) so findings may not apply to Taiwanese persons living in other geographic regions. Longitudinal studies are necessary to determine whether these relationships are consistent over time and whether psychosocial adjustment improves gradually, especially because a previous study has demonstrated that quality of life in patients with CRC and a colostomy significantly improved after 1 year.[52]

Clinical Implications

The worst adjustment problem in Taiwanese patients with CRC and a colostomy is in the area of sexual relationships. WOC nurses should routinely evaluate patients' sexual function before and after colostomy surgery and provide appropriate education and counseling. However, previous research has shown that nurses believed that sexual problems were least important in nursing care and that the hospital environments in Taiwan were not sufficiently private to discuss sexual issues.[53] Therefore, continuing education should address these barriers to care and enhance nurses' level of comfort in discussing sexual issues with patients.

Spiritual well-being is an important factor in the adjustment of patients with CRC and a colostomy. However, we lack a complete and culturally competent instrument for the clinical evaluation of spirituality, and clinical experience suggests that many patients and nurses lack a clear understanding of similarities and differences in concepts of "spirituality" and "religion." A validated instrument and standardized plan of spiritual care is needed to assist skills of nurses in the evaluation of spiritual well-being among patients with CRC and ostomies. Many hospitals and medical centers have designated areas for people of different religions to practice religious rituals, and some provide religious support groups. Ensuring access to a hospital chaplain is also recommended.

Conclusion

We found that spiritual well-being was significantly related to the quality of patients' adjustment to life after colostomy surgery. However, we also found that adjustments in sexual relationships tended to be poor. Therefore, providing appropriate strategies to enhance spiritual well-being is indicated. Education about sexual function and recovery is especially needed.

KEY POINTS

✔ Persons with CRC and an ostomy reported moderate levels of spiritual well-being, existential well-being, and religious well-being.

✔ Participants reported strong extended family relationships but poor adjustment in sexual relationships.

✔ Spiritual well-being was significantly associated with psychosocial adjustment.

✔ Spiritual well-being is an important factor in Taiwanese patients when faced with psychosocial adjustment related to life with CRC and a colostomy.

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