

Analysis of the Status and Influencing Factors of Anticipated Stigma in Patients with Permanent Intestinal Ostomy After Colorectal Cancer Surgery

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Disclution

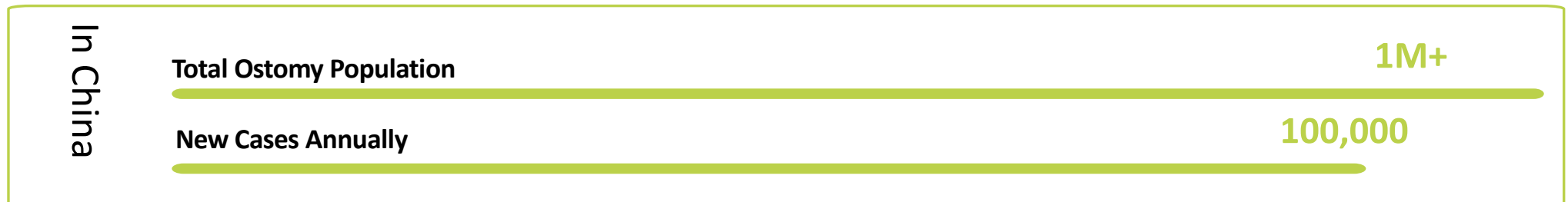
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1.1 Background | Epidemiology

As colorectal cancer is one of the most common malignant tumors in China, ostomy surgery remains a critical life-saving treatment.

With approximately 100,000 new permanent ostomy cases occurring annually, the total population of ostomy patients has exceeded 1 million.



- Wang F, Yu HY, Zhang SJ, et al. Social alienation and its influencing factors in patients with enterostomy[J]. J Nurs Sci, 2022, 37(14): 40-43.
- Zhong Y, Wang S, Wei HY, et al. Research progress on supportive interventions for stigma in abdominal stoma patients[J]. Chin Nurs Res, 2023, 37(11): 1978-1982.

1.2 Background | Understanding Anticipated Stigma

Anticipated Stigma : refers to the fear of future negative evaluation and discrimination that individuals expect to receive if their condition becomes known.

This fear is driven by uncontrollable physiological issues, such as:

- Fecal leakage and accidents
- Unpleasant odor concerns
- Visible stoma appearance
- Need for specialized care

Leading to persistent internal anxiety about how others will react.

- Earnshaw VA, Quinn DM, Park CL. Anticipated stigma and quality of life among people living with chronic illnesses[J]. Chronic illness, 2012, 8(2):79-88.
- Li LP, Sun JP, Wu HX, et al. Research status of stigma in patients with chronic diseases[J]. Nurs J Chin People's Liberation Army, 2020, 37(3): 75-78.

1.3 Background | From Anticipated Stigma to Social Isolation

Behavioral Mechanism: To avoid potential rejection, patients adopt negative coping strategies:

(a) Social Avoidance

(b) Fear of Rejection

(c) Activity Restriction

These behaviors lead to profound **social isolation**, cutting patients off from community support and social networks.

- Social isolation is strongly linked to existential distress (feelings of meaninglessness, loneliness, and low self-worth) and can result in poor treatment adherence and delayed recovery.

- Wood L, Byrne R, Morrison AP. An Integrative Cognitive Model of Internalized Stigma in Psychosis. *Behav Cogn Psychother*. 2017;45(6):545-560.
- Vehling S, Kissane DW. Existential distress in cancer: Alleviating suffering from fundamental loss and change. *Psychooncology*. 2018;27(11):2525-2530.

1.4 Background | Research Gap

While experienced stigma is well-documented, anticipated stigma remains under-researched despite being potentially more destructive to mental health .



Aim: investigate the current status of their anticipated stigma, analyze key influencing factors, and explore the intrinsic connection between anticipated stigma and existential distress.

- Earnshaw VA, Quinn DM, Park CL. Anticipated stigma and quality of life among people living with chronic illnesses[J]. Chronic illness, 2012, 8(2):79-88.

1.5 Background | Study Objectives

01

To investigate the current status of anticipated stigma among patients with permanent ostomy , including severity levels and dimensional patterns.

03

To explore the correlation between anticipated stigma, social isolation mechanisms, and existential distress to guide clinical interventions.

02

To analyze influencing factors across demographic, clinical, and economic dimensions to identify high-risk populations.

- Li LP, Sun JP, Wu HX, et al. Research status of stigma in patients with chronic diseases[J]. Nurs J Chin People's Liberation Army, 2020, 37(3): 75-78.

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2.1 Method | Study Design & Sampling Method

Study design : A cross-sectional descriptive design was employed in tertiary hospitals in Chongqing, China.

Sampling method : We recruited patients using consecutive randomized sampling from January to March 2025

2.2 Method | Inclusion & Exclusion Criteria

Inclusion criteria

- (a) confirmed colorectal cancer per the 2023 Chinese Guidelines , treated with radical rectal resection, resulting in a permanent stoma;
- (b) age ≥ 18 years;
- (c) sufficient linguistic capacity to complete surveys (independently or with aid).
- (d) voluntary participation with informed consent.

Exclusion criteria

- (a) suffering from severe psychiatric disorders.
- (b) complicated by severe infectious or endocrine diseases.
- (c) co-existing with other malignant tumors.

- National Health Commission of the People's Republic of China Medical Administration Bureau, Chinese Medical Association Oncology Branch. Chinese guidelines for diagnosis and treatment of colorectal cancer (2023 edition)[J]. Peking Union Med Coll Hosp J, 2023, 14(4): 706-733.

2.3 Method | Sample Size Calculation

G*Power 3.1 software was used for sample size estimation.

- Effect size (Cohen's f^2) = 0.18 (based on pilot study, n=30)
- α (two-tailed) = 0.05
- Power ($1-\beta$) = 0.80
- Number of predictors = 15 (maximum)
- → Minimum required sample size = 117 cases

20% invalid response rate → Final required = at least 146 cases

✓ This study obtained 356 valid samples, exceeding the requirement.

- Ni P, Chen JL, Liu N. Sample size estimation for quantitative research in nursing[J]. Chin J Nurs. 2010;45(4):378-380.

2.4 Method | Measures

General Information Questionnaire

Chronic Illness Anticipated Stigma Scale

Existential Distress Scale

- Wang ZY, Li LP, Di SZ, et al. Sinicization and reliability and validity test of the anticipated stigma scale for patients with chronic diseases[J]. Chin Nurs Manag. 2024;24(5):681-686.
- Earnshaw VA, Quninn DM, Kalichman SC, et al. Development and psychometric evaluation of the Chronic Illness Anticipated Stigma Scale[J]. Journal of behavioral medicine, 2013, 36(3):270-282.
- Lo C, Panday T, Zeppieri J, et al. Preliminary psychometrics of the Existential Distress Scale in patients with advanced cancer[J]. European journal of cancer care, 2017, 26(6):73-82.
- Xiao HM, Lin XD, Wu H, et al. Cross-cultural adaptation and psychometric evaluation of the existential suffering scale for patients with advanced cancer[J]. J Nurs Sci. 2022;37(9):74-77.

2.5 Method | Data Analysis

Statistical analyses were performed using SPSS 22.0 (Chicago, IL, USA) .



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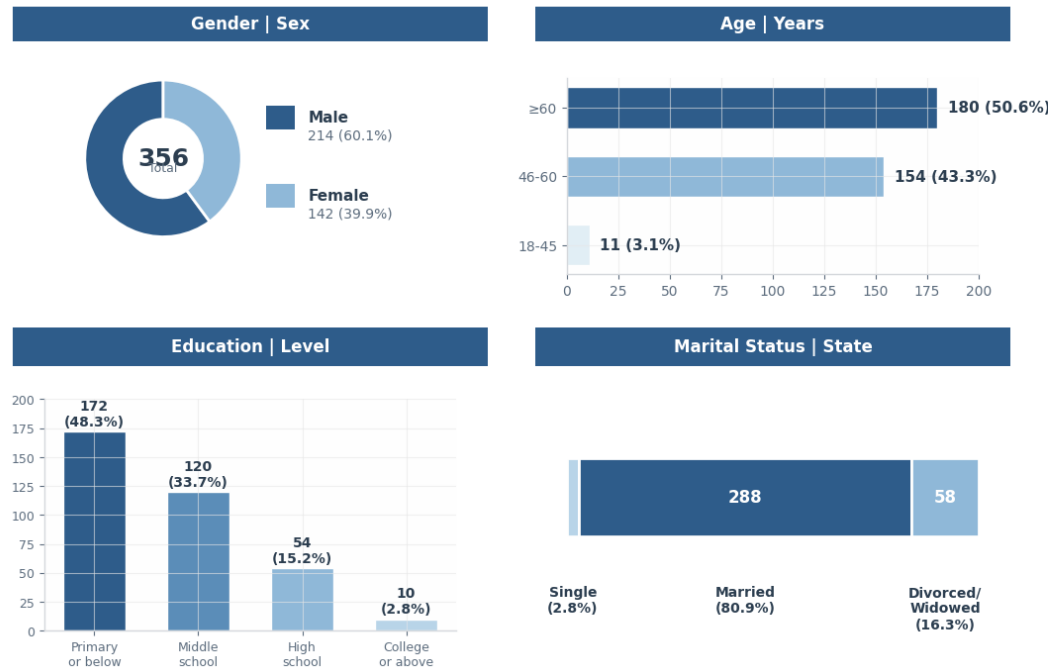
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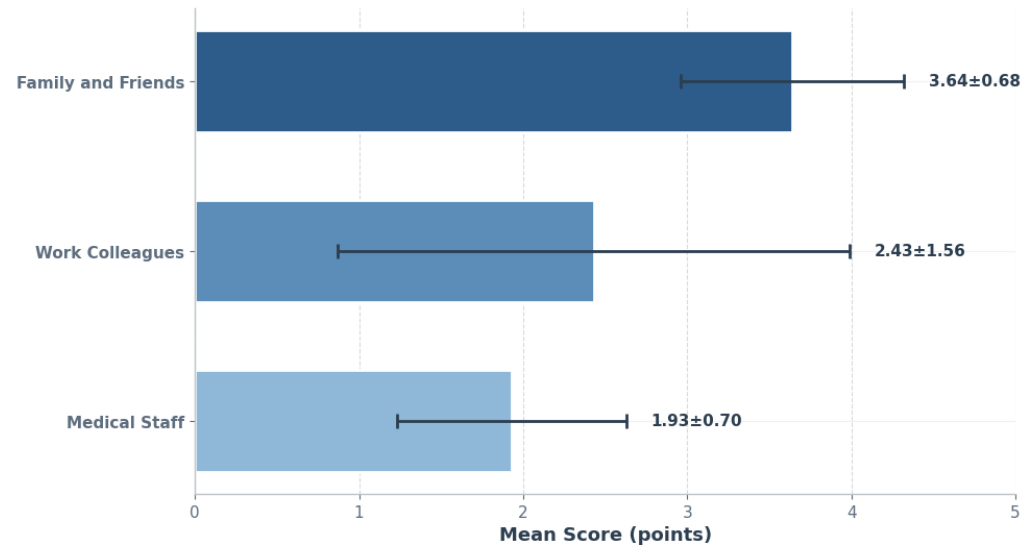
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3.1 Result | Participants Characteristics



All participants had a permanent ostomy, though 86.5% still perceived it as temporary psychologically.

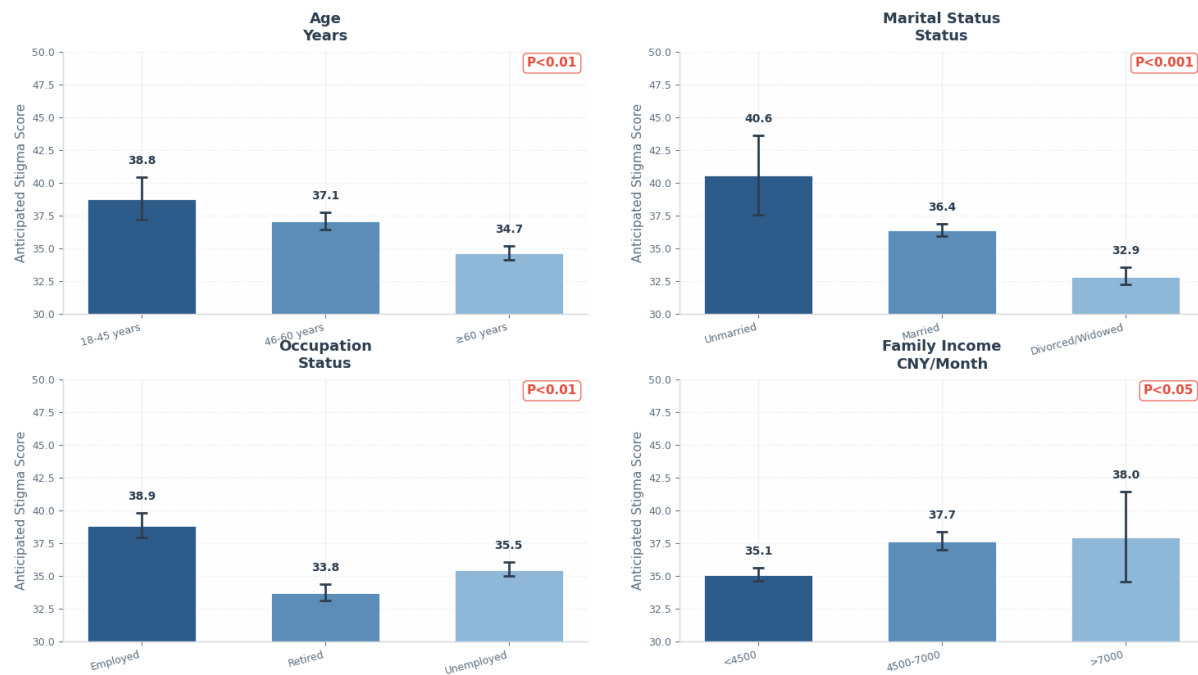
3.2 Result | Anticipated Stigma Scores



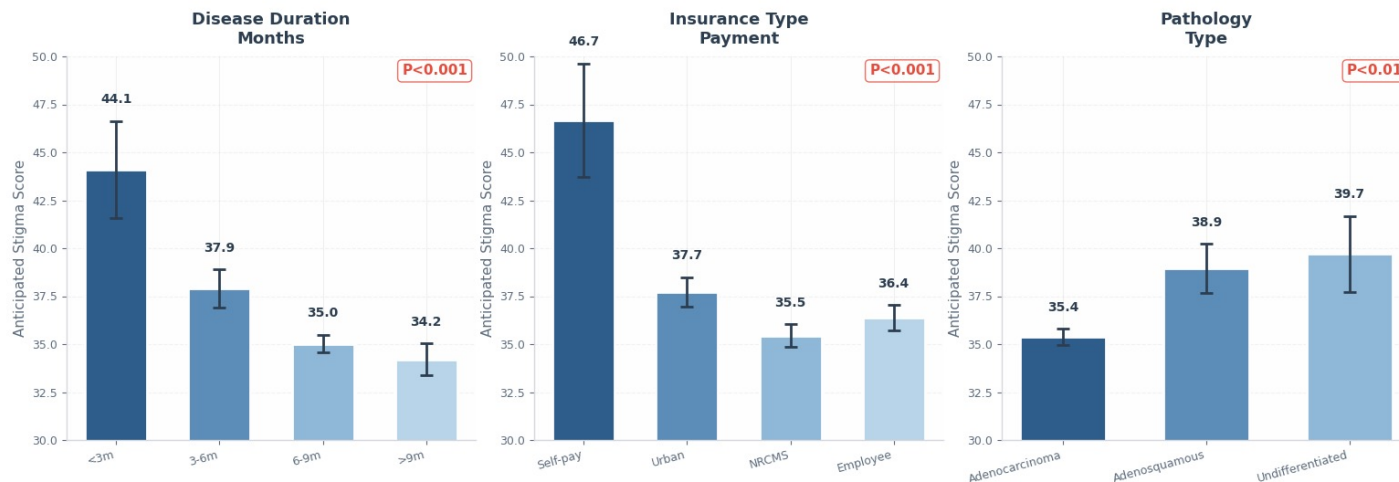
Total anticipated stigma score:
 35.97 ± 7.70

Moderately high level (above median 30). Highest concern from friends and family.

3.3 Result | Factors Influencing Anticipated Stigma

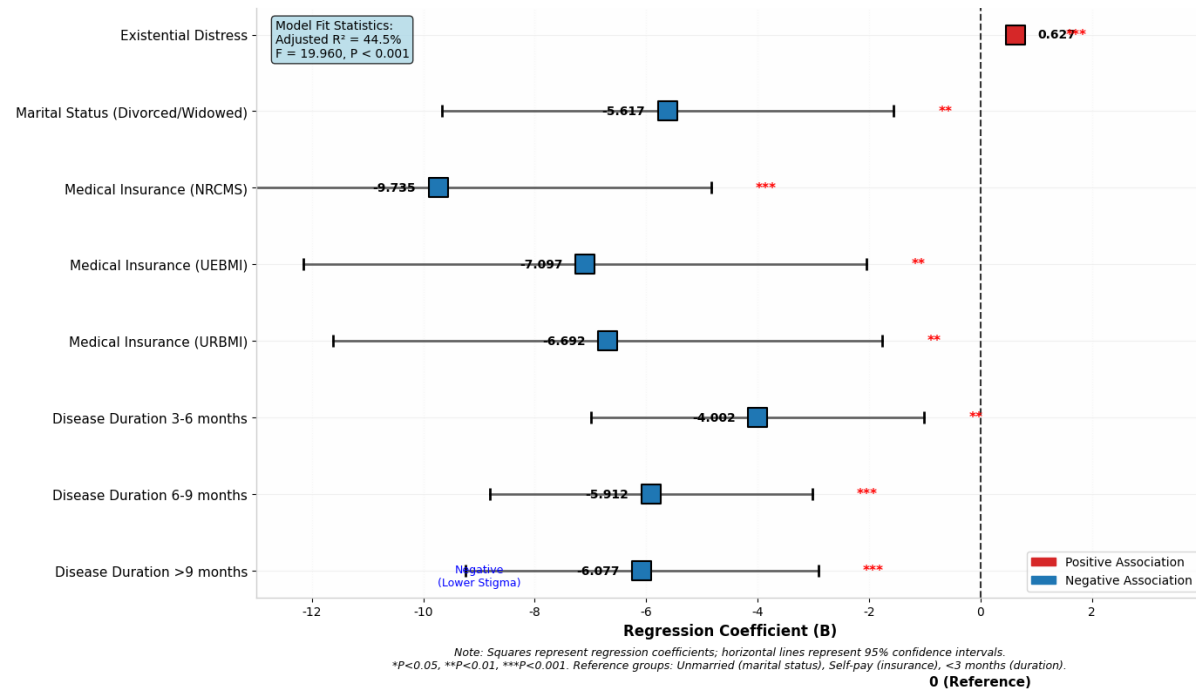


3.3 Result | Factors Influencing Anticipated Stigma



Single-factor analysis identified 7 factors significantly associated with anticipated stigma (all $P < 0.05$)

3.4 Result | Multiple Linear Regression



3.5 Result | Key Findings

- Existential distress is the only positive predictor and the strongest factor ($\beta = 0.515$), indicating it should be the primary target for intervention
- Self-pay patients have the highest stigma; all insurance types provide significant protection
- Early postoperative period (<3 months) is the critical window for stigma intervention
- Unmarried patients require more psychological support compared to divorced/widowed patients

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4.1 Disclution | Moderately High Level of Anticipated Stigma

- Mainly because the stoma is visible, and patients fear negative reactions from people close to them.
- They worry most about what family and friends will think, and their opinions strongly affect how patients feel about themselves.
- That's why interventions need to respect cultural values like family harmony and close relationships. **Family-centered support is really important.**

• Chen J, Liu F, Wang Y. Effect of family nursing intervention on stigma and social adaptation in patients with enterostomy[J]. Mod Nurse, 2023, 30(4): 67-70.

4.2 Disclution | Marital Status

- Divorced/widowed patients showed lower stigma compared to unmarried patients.
- **Unmarried patients:** Lack stable partner support, increasing vulnerability to isolation and stigma perception
- **Divorced patients:** May have developed greater psychological resilience through past adversity

- Liu WY, Jin RH, Huai PP. Research progress on psychological resilience in patients with chronic diseases[J]. Chin Nurs Manag, 2023, 23(2): 297-301.
- Wang T, Li H, Zhang M. Comparative study on psychosocial adaptability in enterostomy patients with different marital status[J]. Mod Nurse, 2024, 31(2): 33-36.

4.3 Disclution | Disease Duration

- Patients with shorter duration (<3 months) correlated with higher stigma
- Window of Opportunity: First 3 months are critical for intervention
 - a. Skill acquisition period: Learning stoma care creates competence anxiety
 - b. Body Image Shock: Initial confrontation with altered appearance
 - c. Uncertainty Peak: Unknown long-term outcomes fuel worry

- Song Q, Liu C, Lv X, Wang J, Yin G. Course and predictors of psychological distress among colorectal cancer survivors [27] Tozoğlu EÖ, Gürbüz N. Internalized stigma level, family self-stigma, and family burden of patients receiving community mental health center services: a comparative, longitudinal study. Front Psychiatry. 2024;15:1469448.

4.4 Disclusion | Medical Insurance Payment Method

- Out-of-pocket payment associated with highest stigma scores
- Economic disadvantages not only bring difficulties in life, but also translate into psychological and social rejection and loss of self-worth.
- Cancer patients with a higher tendency for compulsive thinking are more likely to experience repetitive pessimistic thinking, which in turn leads to hyper-perception of stress, negative emotions such as depression, and ultimately leads to SI [18, 19].

• Yin H, Zhang X, Wang JH, et al. Analysis of out-of-pocket direct economic burden and economic risk among inpatients with chronic diseases in China, 2013[J]. Chin J Public Health, 2021, 37(4): 618-622.

4.5 Discussion | Positive Correlation between SS and AS

- The results of this study indicate that comparisons of anticipated shame scores among patients with different ages, marital statuses, occupational statuses, monthly household incomes, disease durations, medical insurance payment methods, and pathological subtypes showed statistically significant differences (all $P < 0.05$), as shown in Table 1. Pearson correlation analysis revealed a **positive correlation between anticipated shame and survival distress scores** in patients with permanent colostomy following colorectal cancer surgery ($r=0.445$, $P<0.001$).

• Xiao HM, Lin XD, Wu H, et al. Sinicization, reliability and validity of the suffering scale for advanced cancer patients[J]. J Nurs Sci, 2022, 37(9): 74-77.

4.6 Disclution | Chinese Culture: The Role of "Face"

- In many Chinese cultural contexts, there is a strong emphasis on social acceptance and bodily wholeness, which can make patients particularly sensitive to changes in their appearance.
- Many worry that the stoma will affect how they are perceived by others and impact their social interactions. For these reasons, **culturally adapted interventions, social skills training, and peer role models are strongly recommended.**

• Wang T, Li H, Zhang M. Comparative study on psychosocial adaptability in enterostomy patients with different marital status[J]. Mod Nurse, 2024, 31(2): 33-36.

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5.1 Conclusion

- This study provides a comprehensive examination of anticipated stigma in Chinese colostomy patients, identifying culturally-specific patterns and modifiable risk factors.
- Marital status, disease duration, medical insurance payment method, and survival distress were identified as key factors.
- Findings offer an evidence-based roadmap for clinical intervention to improve patient's psychosocial outcomes and improving the quality of life.

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Thanks all

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