The role of personality in the course of health-related quality of life and disease-specific health status among colorectal cancer survivors

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Introduction

• Increasing number of colorectal cancer (CRC) survivors

• Some experience a healthy cancer survivorship, some don’t

• Most studies focus on role of clinical variables (e.g. diagnosis, treatment) on HRQOL and disease-specific health status

• The role of individual differences in personality is underexposed
Introduction

• Type D personality is an important predictor of HRQOL and disease-specific health status in various populations

• Type D personality consists of two personality traits; negative affectivity (NA) and social inhibition (SI)

• Four groups can be made;
  - NA+SI+ (Type D), NA+SI- (NA only), NA-SI+ (SI only), NA-SI- (reference group)

• Prospective studies on Type D among CRC are lacking
Aim of present study

- Aims:
  - Study the degree to which HRQOL and disease-specific health status can be explained by individual differences in personality
  - While controlling for sociodemographic and clinical characteristics
  - In a large prospective population-based sample of CRC patients up to 11 years after diagnosis
Methods: Participants

- Data collected within the PROFILES registry
  - www.profilesregistry.nl *

- Patient selection:
  - Everyone diagnosed with CRC between 2000-2009
  - registered by the Eindhoven Cancer Registry

- They received a questionnaire in 2010, 2011 and 2012.

* Van de Poll-Franse, European Journal of cancer, 2011
Methods: Data

• Socio-demographic and clinical data:
  – Obtained from the cancer registry; stage, grade, treatment, date of diagnosis, date of birth etc.

• Questionnaires;
  – Type D personality: DS14
  – Quality of life: EORTC QLQ-C30.
  – Disease-specific health status: EORTC QLQ-CR38
  – Depression: HADS
Results:
Response and patient characteristics

• Response:
  – The questionnaire was completed by 73% (n=2625) at T1, 83% (n=1643) at T2 and 82% (n=1458) at T3.

• Patient characteristics (T1):
  – 57% male
  – 59% colon cancer
  – Mean age 68
  – Mean time since diagnosis 5 years
  – 19% (n=328) had a Type D personality
Results: ‘Type D’ and ‘NA only’

• At T1, patients with ‘Type D’ and ‘NA only’ reported a worse HRQoL and more disease-specific symptoms.
• These differences were quite stable across the three time points

• However;
  – Problems with *male sexual functioning* were more prevalent among Type Ds at T1
  – Problems with *weight loss* and *female sexual functioning* were more prevalent among Type D’s at T2
  – And Type D’s reported more problems regarding *sexual enjoyment* across all time points.
Results:
Global quality of life

![Graph showing global quality of life over time for different groups]
Results:

Pain

![Graph showing pain levels over time for different groups: Reference group (NA-SI-), Social inhibition (NA-SI+), Negative affectivity (NA+SI-), Type D personality (NA+SI+).]
Results: Fatigue

The graph shows the trend of fatigue over three time points (T1, T2, T3). The lines represent different groups:

- Reference group (NA-SI-)
- Social inhibition (NA-SI+)
- Negative affectivity (NA+SI-)
- Type D personality (NA+SI+)

The y-axis represents fatigue levels, ranging from 0 to 35.
Results:
sexual enjoyment
Results: Type D personality

- Compared to the reference group, **Type Ds** had an increased risk of an:

  - impaired global quality of life, cognitive and emotional functioning
  - more insomnia, diarrhea, constipation, defecation, gastrointestinal, stoma-related, and female sexual problems
  - less sexual enjoyment, a worse body image and future perspective.
  - even after controlling for sex, age, time since diagnosis, stage, chemotherapy, comorbidity, partner, education, time of questionnaire, and depression.
Results:
Negative affectivity only

- Compared to the reference group, the **NA only group** had an increased risk of an:
  - impaired global quality of life, cognitive, emotional, and social functioning
  - More pain, fatigue, insomnia, and financial, micturition, diarrhea, defecation, gastrointestinal, and stoma-related problems
  - Worse body image and future perspective
  - Even after controlling for sex, age, time since diagnosis, stage, chemotherapy, comorbidity, partner, education, time of questionnaire, and depression.
Conclusions

- CRC survivors with a ‘Type D personality’ and those with ‘high NA’ reported a significantly worse HRQoL and disease-specific health status compared to the other two groups.

- These differences were quite stable over time.

- Even after controlling for sociodemographic and clinical variables.
Conclusions

- Evaluating HRQoL and disease-specific health status according to personality is important as it informs about disease burden and treatment-related effects directly from the patients' perspective.

- Our results can help clinicians to inform CRC patients about potential late side-effects.

- It could also lead to strategies for tailored long-term management and support based on a more individualized approach, as a function of stable differences in coping.
Take home message

The recognition of NA is important as these patients reported a worse HRQoL and disease-specific health status.
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