



# ASSOCIATIONS BETWEEN SOCIODEMOGRAPHIC, GENERAL HEALTH INFORMATION AND EMOTIONAL WELL-BEING OF PATIENTS LIVING WITH CANCER IN THE FREE STATE



Group members: Hannah Brodie, Grete Lategan, Jaco Lottering, Maryna Nell, Marisca Stander, Caitlin Whytock and Nomthandazo Zondi

Study leader: Jane' Welman

[www.ufs.ac.za](http://www.ufs.ac.za)

*Inspiring excellence, transforming lives  
through quality, impact, and care.*

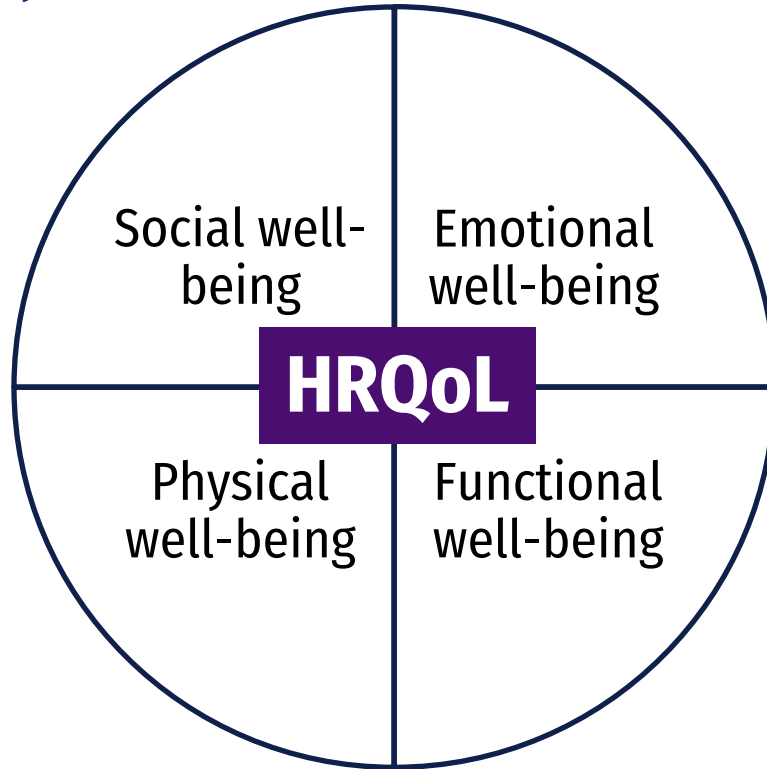
UNIVERSITY OF THE  
FREE STATE  
UNIVERSITEIT VAN DIE  
VRYSTAAT  
YUNIVESITHI YA  
FREISTATA



UFS  
HEALTH SCIENCES

# Key terms

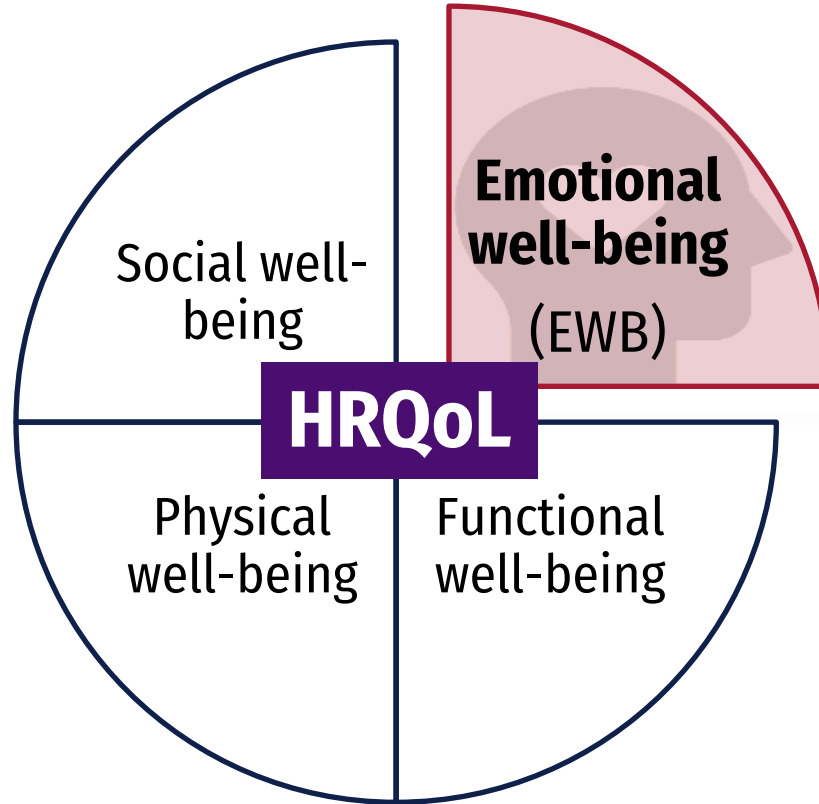
HRQoL - Health-Related Quality of Life



(Lavin-Pérez et al., 2021; Karimi & Brazier, 2016)



# Key terms



(Lamers et al., 2012; Simsek, 2011)



# Introduction

- **Cancer prevalence** (World Health Organisation, 2023)



- **HRQoL and EWB** (Lewandowska et al., 2020)

- **Role of physiotherapy**



- Strengthening exercises
- Aerobic exercises
- Breathing exercises

19.3 mil

30.2 mil



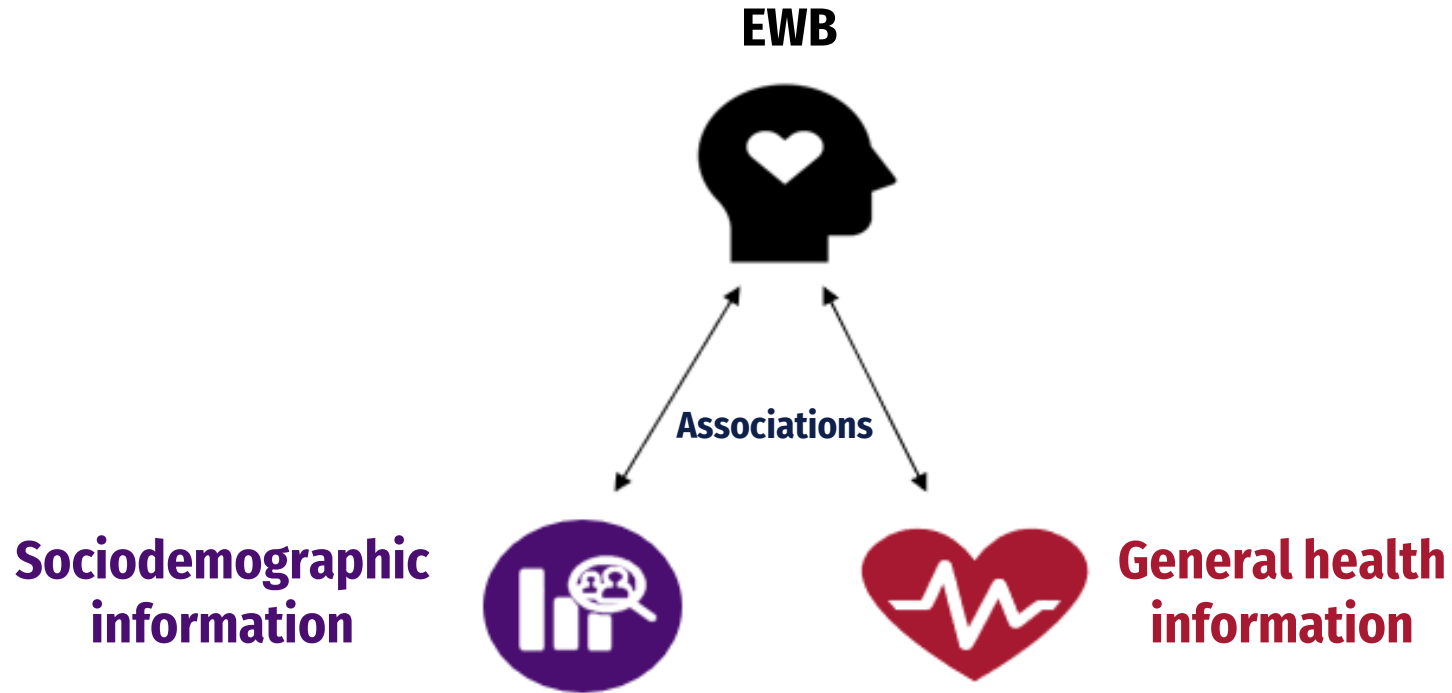
2020

2040

(Odynets et al., 2019; Bennet et al., 2018; Probst, 2017; Pattanshetty & Chopde, 2016; Jerath et al., 2015; Eyigor & Akdeniz, 2014; Ozalevli, 2013; Mishra et al., 2012)



# Research Aim



(Nedjat-Haeim et al., 2021; Zyzniewska-Banaszak et al., 2021; Ashcraft et al., 2019; Trudel Fitzgerald et al., 2019; Rizzo, 2016; Ozalevli, 2013; Zimmerman et al., 2011 Traeger et al., 2009)

# Methods

## Study design

Descriptive and cross-sectional

## Measurement tools

Self-developed and FACT-G questionnaire

## Study population

Convenience sampling

## Ethical approval

UFS-HSD2022/1452/2911

## Selection Criteria

Inclusion criteria

## Data analysis

Descriptive statistics and associations



# Methods

## Study design

Descriptive and cross-sectional

## Measurement tools

Self-developed and FACT-G questionnaire

## Study population

Convenience sampling

## Ethical approval

UFS-HSD2022/1452/2911

## Selection Criteria

Inclusion criteria

## Data analysis

Descriptive statistics and associations



# Methods

## Study design

Descriptive and cross-sectional

## Measurement tools

Self-developed and FACT-G questionnaire

## Study population

Convenience sampling

## Ethical approval

UFS-HSD2022/1452/2911

## Selection Criteria

Inclusion criteria

## Data analysis

Descriptive statistics and associations





# Methods

## Selection Criteria

Inclusion criteria

**Admitted to the oncology ward or  
attended oncology clinic**

**Understood English, Afrikaans, or  
Southern Sotho**

**Voluntarily agreed to participate  
and provided written informed  
consent**

**≥ 18 years old**

# Methods

## Study design

Descriptive and cross-sectional

## Measurement tools

Self-developed and FACT-G questionnaire

## Study population

Convenience sampling

## Ethical approval

UFS-HSD2022/1452/2911

## Selection Criteria

Inclusion criteria

## Data analysis

Descriptive statistics and associations



# Methods

EWB domain in the FACT-G questionnaire		Not at all	A little bit	Some-what	Quite a bit	Very much
GE1	I feel sad	0	1	2	3	4
GE2	I am satisfied with how I am coping with my illness	0	1	2	3	4
GE3	I am losing hope in the fight against my illness	0	1	2	3	4
GE4	I feel nervous	0	1	2	3	4
GE5	I worry about dying	0	1	2	3	4
GE6	I worry that my condition will get worse	0	1	2	3	4

## Measurement tools

Self-developed and FACT-G questionnaire

# Methods

## Study design

Descriptive and cross-sectional

## Measurement tools

Self-developed and FACT-G questionnaire

## Study population

Convenience sampling

## Ethical approval

UFS-HSD2022/1452/2911

## Selection Criteria

Inclusion criteria

## Data analysis

Descriptive statistics and associations



# Methods

## Study design

Descriptive and cross-sectional

## Measurement tools

Self-developed and FACT-G questionnaire

## Study population

Convenience sampling

## Ethical approval

UFS-HSD2022/1452/2911

## Selection Criteria

Inclusion criteria

## Data analysis

Descriptive statistics and associations



# Methods

## SOCIODEMOGRAPHIC INFORMATION

- ✓ Age
- ✓ Gender
- ✓ Marital status
- ✓ Level of education
- ✓ Employment status

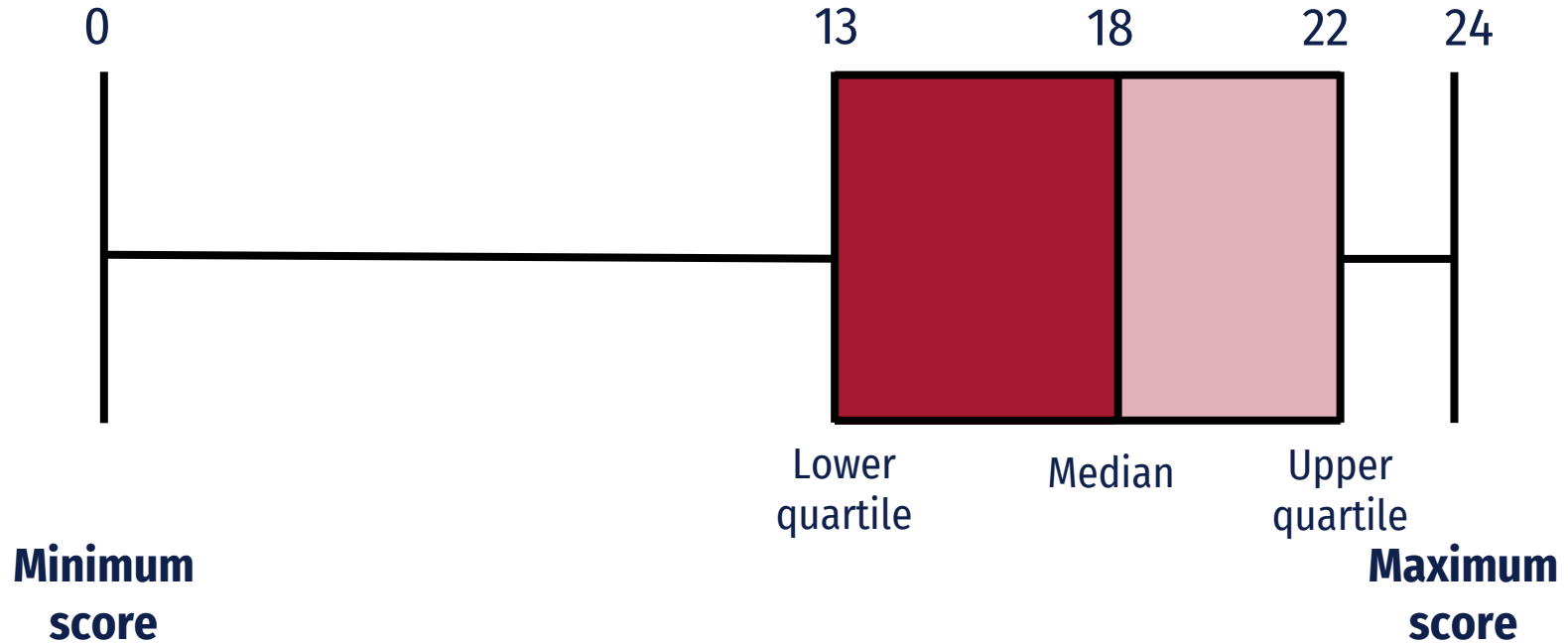


## GENERAL HEALTH INFORMATION

- ✓ Type of cancer
- ✓ Type of treatment
- ✓ Time since diagnosis

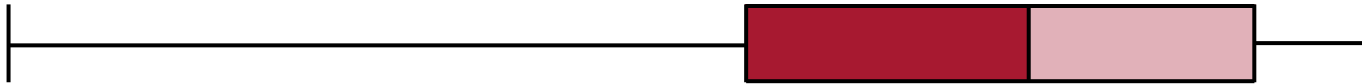
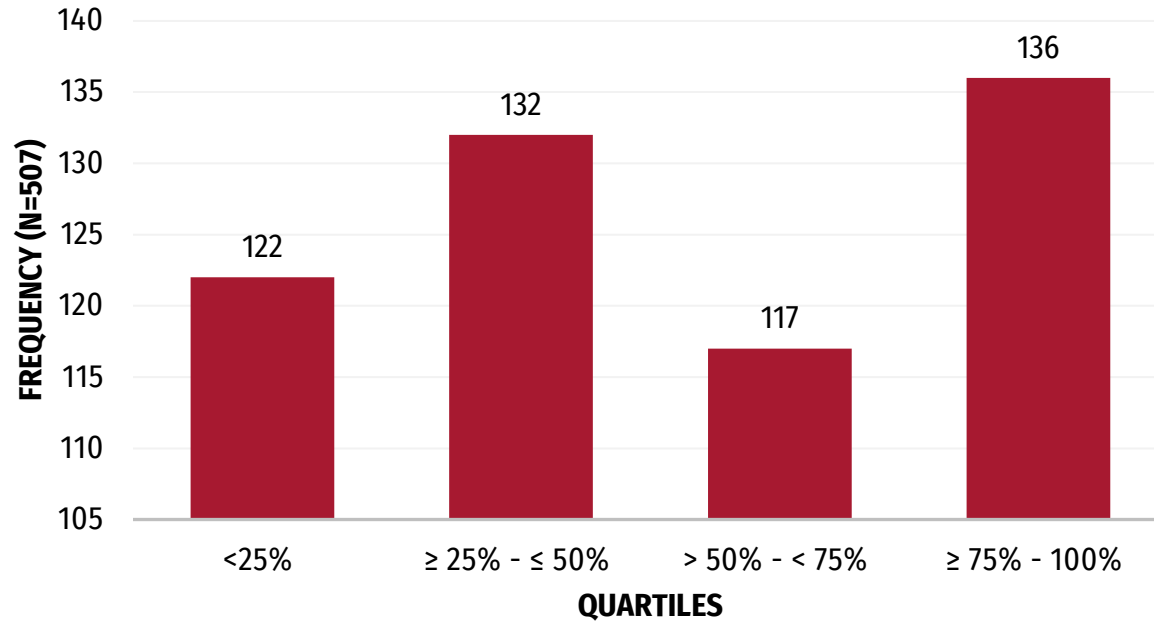
# Results

## EWB scores



# Results

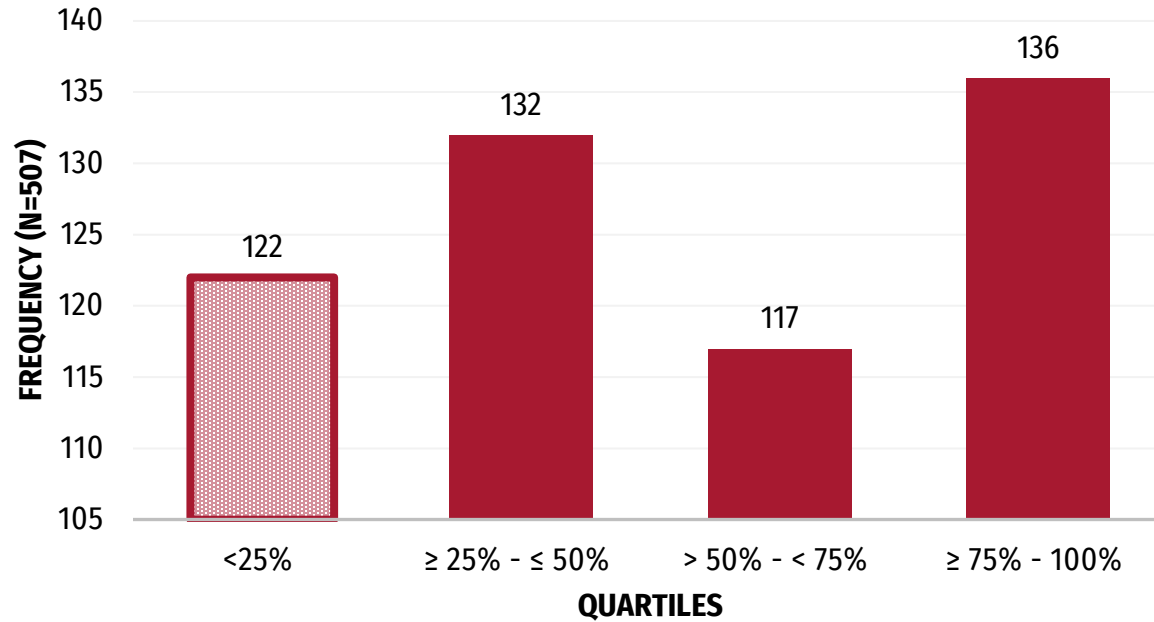
## EWB scores





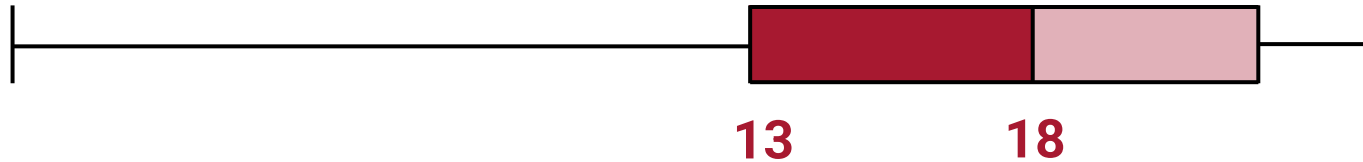
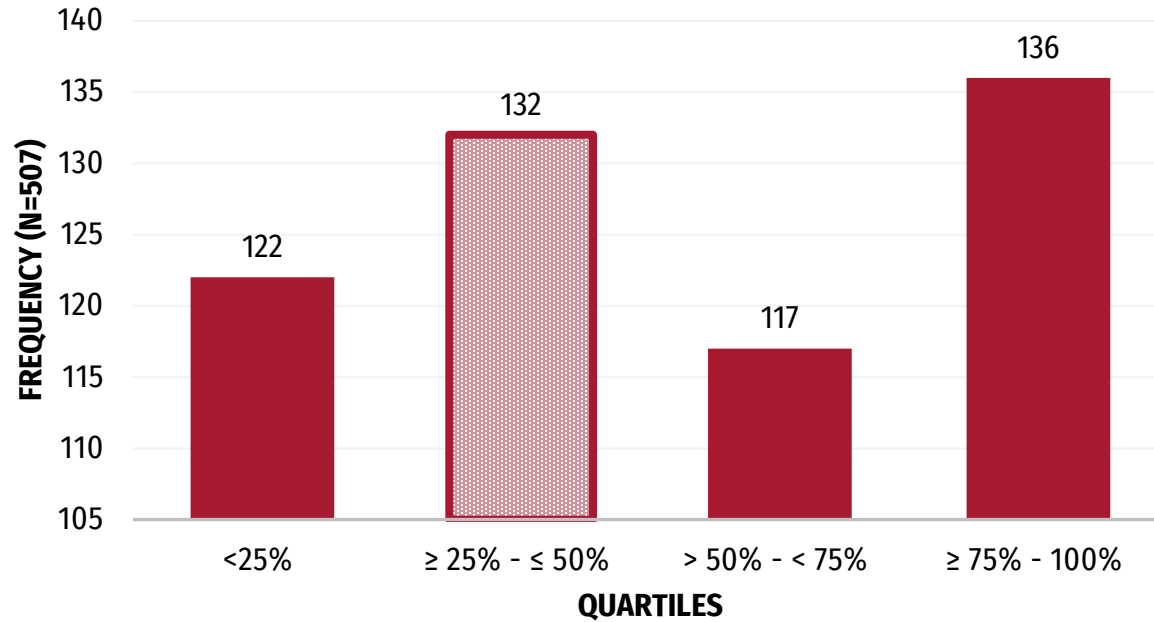
# Results

## EWB scores



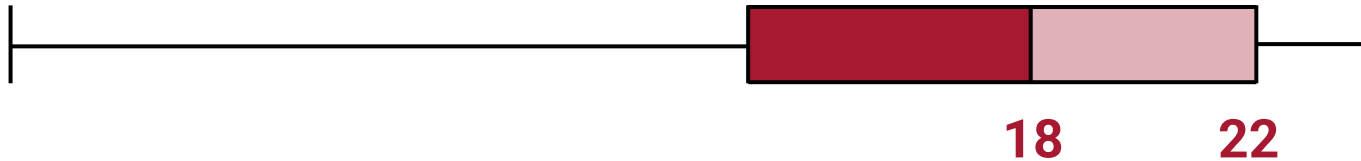
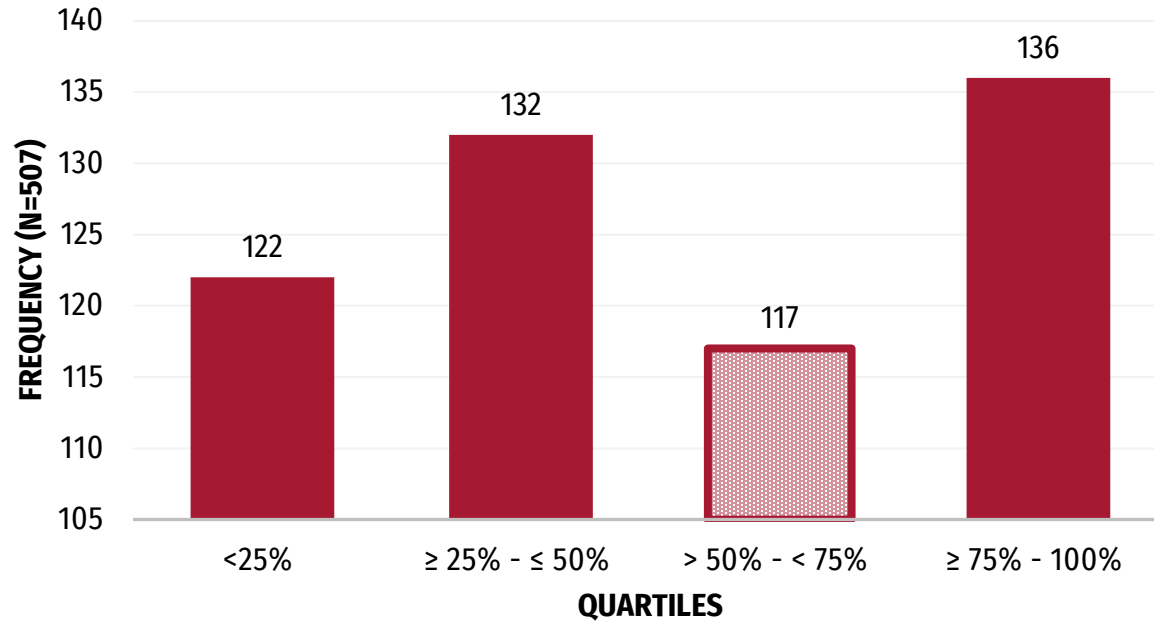
# Results

## EWB scores



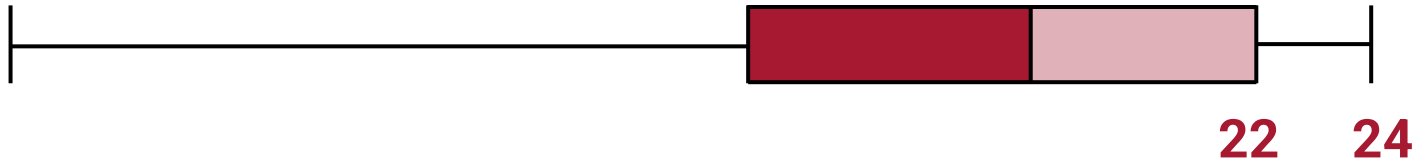
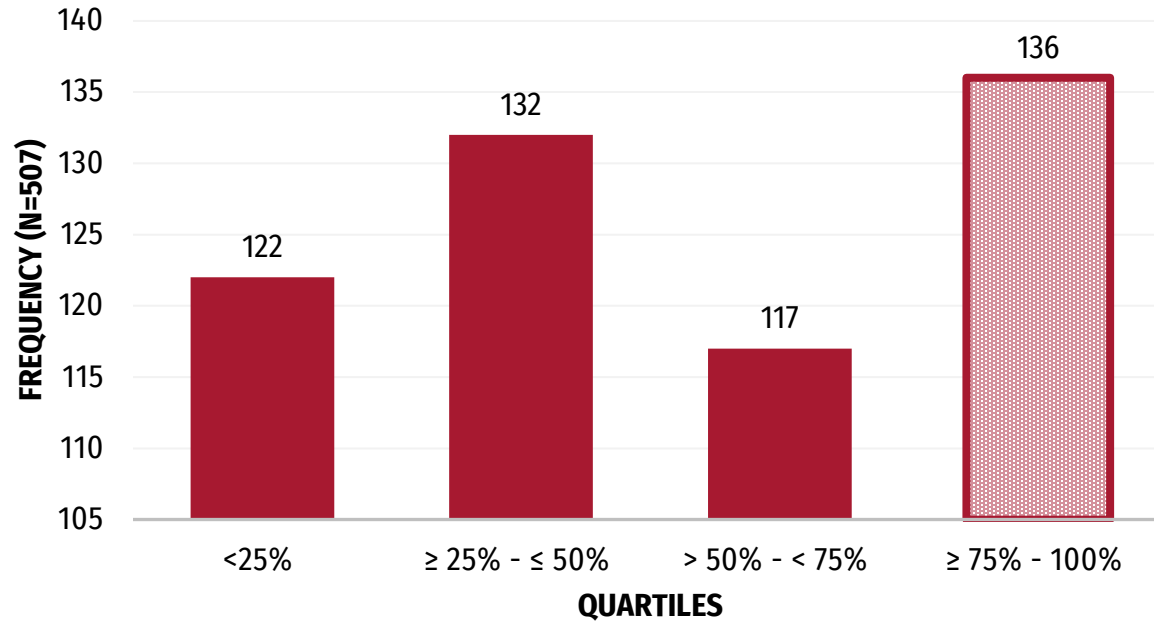
# Results

## EWB scores



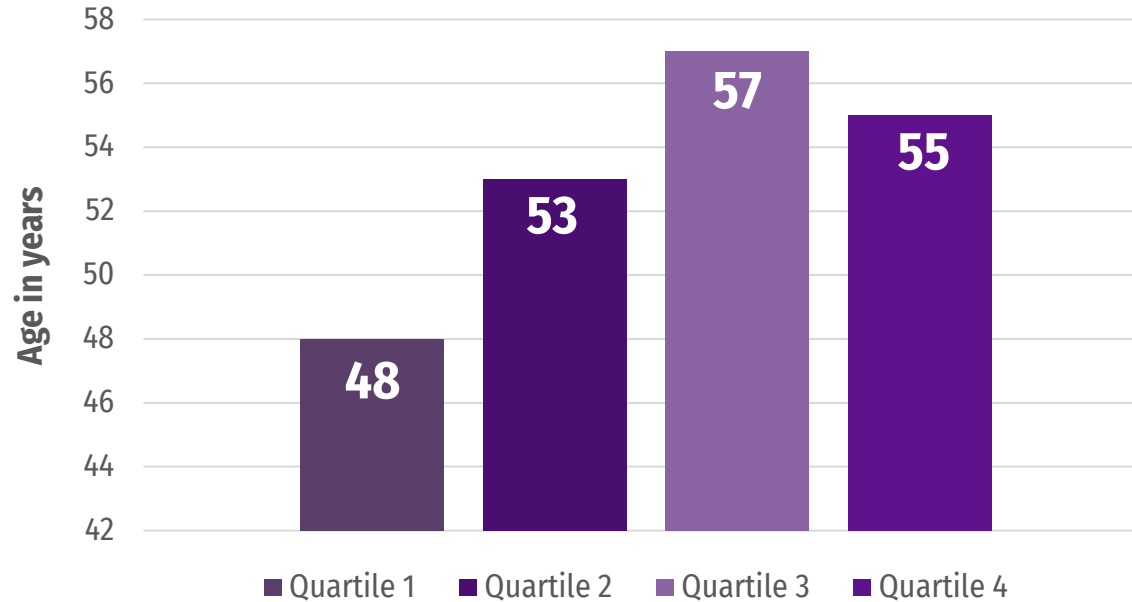
# Results

## EWB scores



# Results

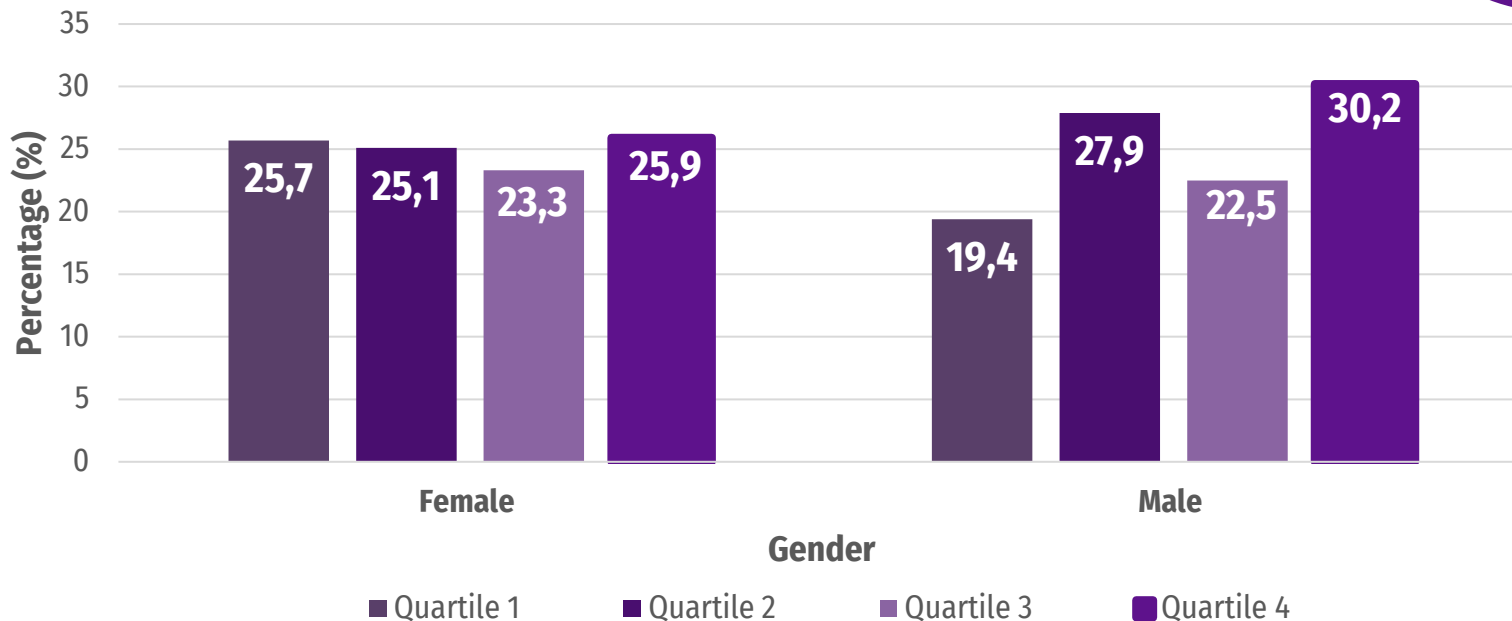
## Median age of participants in each quartile



# Results

**Female**  
74.1%

## Distribution of EWB scores for Gender



# Results

**Breast**  
39.3%

**Cervical**  
17.0%

**Prostate**  
10.3%



# Results

Type of cancer	Quartile 1 n (%)	Quartile 2 n (%)	Quartile 3 n (%)	Quartile 4 n (%)
Cervical	19 (22.1)	22 (25.6)	17 (19.8)	<b>28 (32.6)</b>
Bone	3 (25.0)	1 (8.3)	3 (25.0)	<b>5 (41.7)</b>
Unsure	7 (30.4)	6 (26.1)	6 (26.1)	4 (17.4)
Lung	7 (31.8)	8 (36.4)	4 (18.2)	3 (13.6)

Median





# Results

Type of cancer	Quartile 1 n (%)	Quartile 2 n (%)	Quartile 3 n (%)	Quartile 4 n (%)
Cervical	19 (22.1)	22 (25.6)	17 (19.8)	<b>28 (32.6)</b>
Bone	3 (25.0)	1 (8.3)	3 (25.0)	<b>5 (41.7)</b>
Unsure	<b>7 (30.4)</b>	<b>6 (26.1)</b>	6 (26.1)	4 (17.4)
Lung	7 (31.8)	8 (36.4)	4 (18.2)	3 (13.6)

Median



# Results

Type of cancer	Quartile 1 n (%)	Quartile 2 n (%)	Quartile 3 n (%)	Quartile 4 n (%)
Cervical	19 (22.1)	22 (25.6)	17 (19.8)	<b>28 (32.6)</b>
Bone	3 (25.0)	1 (8.3)	3 (25.0)	<b>5 (41.7)</b>
Unsure	<b>7 (30.4)</b>	<b>6 (26.1)</b>	6 (26.1)	4 (17.4)
Lung	<b>7 (31.8)</b>	<b>8 (36.4)</b>	4 (18.2)	3 (13.6)

Median



# Results

Type of treatment	Quartile 1 n (%)	Quartile 2 n (%)	Quartile 3 n (%)	Quartile 4 n (%)
Chemotherapy	62 (21.9)	72 (25.4)	69 (24.4)	<b>80 (28.3)</b>
Radiation	20 (16.3)	36 (29.3)	30 (24.4)	<b>37 (30.1)</b>
Surgery	12 (17.1)	18 (25.7)	17 (24.3)	<b>23 (32.9)</b>
Unknown	17 (32.7)	10 (19.2)	14 (26.9)	11 (21.1)
None	13 (28.9)	12 (26.7)	9 (20.0)	11 (24.4)

Median



# Results

Type of treatment	Quartile 1 n (%)	Quartile 2 n (%)	Quartile 3 n (%)	Quartile 4 n (%)
Chemotherapy	62 (21.9)	72 (25.4)	69 (24.4)	<b>80 (28.3)</b>
Radiation	20 (16.3)	36 (29.3)	30 (24.4)	<b>37 (30.1)</b>
Surgery	12 (17.1)	18 (25.7)	17 (24.3)	<b>23 (32.9)</b>
Unknown	<b>17 (32.7)</b>	10 (19.2)	14 (26.9)	11 (21.1)
None	13 (28.9)	12 (26.7)	9 (20.0)	11 (24.4)

Median



# Results

Type of treatment	Quartile 1 n (%)	Quartile 2 n (%)	Quartile 3 n (%)	Quartile 4 n (%)
Chemotherapy	62 (21.9)	72 (25.4)	69 (24.4)	<b>80 (28.3)</b>
Radiation	20 (16.3)	36 (29.3)	30 (24.4)	<b>37 (30.1)</b>
Surgery	12 (17.1)	18 (25.7)	17 (24.3)	<b>23 (32.9)</b>
Unknown	<b>17 (32.7)</b>	10 (19.2)	14 (26.9)	11 (21.1)
None	<b>13 (28.9)</b>	<b>12 (26.7)</b>	9 (20.0)	11 (24.4)

Median



# Results

Time since diagnosis	Quartile 1 n (%)	Quartile 2 n (%)	Quartile 3 n (%)	Quartile 4 n (%)
Longer than 2 years	32 (22.1)	37 (25.5)	35 (24.1)	<b>41 (28.3)</b>
Last 1 year	19 (20.9)	24 (26.4)	22 (24.2)	<b>26 (28.6)</b>
Last month	28 (37.8)	14 (18.9)	15 (20.3)	17 (23.0)

Median



# Results

Time since diagnosis	Quartile 1 n (%)	Quartile 2 n (%)	Quartile 3 n (%)	Quartile 4 n (%)
Longer than 2 years	32 (22.1)	37 (25.5)	35 (24.1)	<b>41 (28.3)</b>
Last 1 year	19 (20.9)	24 (26.4)	22 (24.2)	<b>26 (28.6)</b>
Last month	<b>28 (37.8)</b>	14 (18.9)	15 (20.3)	17 (23.0)

Median



# Results

Statistical significance value  $p < 0.05$

Variable	p-value (Chi-Square)
Gender	
Female	p=0.34 (Fisher's Exact)
Male	
Prefer not to say	
Frequency missing: 2	
Marital Status	
Married	p=0.17 (Fisher's Exact)
In a relationship, not married	
Live with a partner, not married	
Single, not married	
Widowed	
Divorced	
Separated	
Prefer not to answer	
Frequency missing: 6	
Highest level of education	
Secondary school	p=0.34
Tertiary school	
Primary school	
No schooling	
Prefer not to answer	
Frequency missing: 1	
Employment status	
Pensioner	p=0.73
Unemployed	p=0.37
Full time	p=0.08
Piece job	p=0.52
Part-time	p=0.60
Self-employed	p=0.80

Variable	p-value (Chi-Square)
Type of cancer	
Breast	p=0.91
Cervical	p=0.59
Prostate	p=0.94
Other	-
Skin	p=0.59
Unsure	p=0.73
Lung	p=0.36
Colon	p=0.32
Lymph	p=0.91 (Fisher's exact)
Throat	p=0.86 (Fisher's exact)
Bone	p=0.46 (Fisher's exact)
Brain	p=0.82 (Fisher's exact)
Oesophagus	p=0.37 (Fisher's exact)
Multiple options could be selected	
Type of treatment	
Chemotherapy	p=0.51
Radiation	p=0.14
Surgery	p=0.43
Other	-
Unknown	p=0.27
None	p=0.85
Multiple options could be selected	
Time since diagnosis	
Longer than 2 years	p=0.18
Last 1 year	
Last month	
Last 3 months	
Last 6 months	
Last 2 years	
Frequency missing: 3	





# Results

Statistical significance value  $p < 0.05$

Variable	p-value (Chi-Square)
Gender	
Female	p=0.34 (Fisher's Exact)
Male	
Prefer not to say	
Frequency missing: 2	
Marital Status	
Married	p=0.17 (Fisher's Exact)
In a relationship, not married	
Live with a partner, not married	
Single, not married	

Variable	p-value (Chi-Square)
<b>Type of cancer</b>	
Breast	p=0.91
Cervical	p=0.59
Prostate	p=0.94
Other	-
Skin	p=0.59
Unsure	p=0.73
Lung	p=0.36
Colon	p=0.32
Lymph	p=0.91 (Fisher's exact)

## No Associations

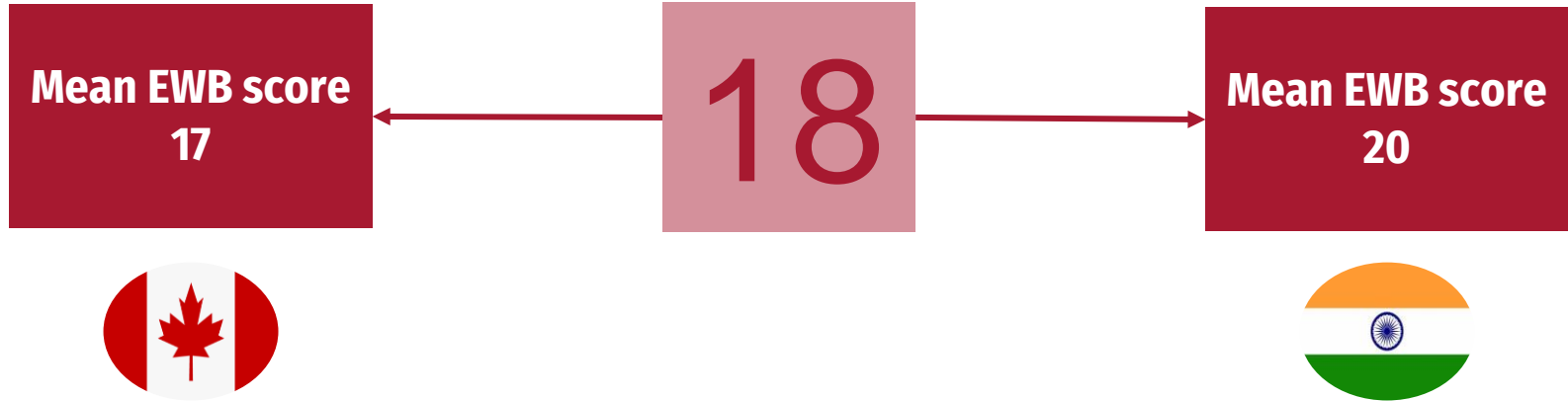
Secondary school		p=0.34
Tertiary school		
Primary school		
No schooling		
Prefer not to answer		
Frequency missing: 1		
Employment status		
Pensioner		p=0.73
Unemployed		p=0.37
Full time		p=0.08
Piece job		p=0.52
Part-time		p=0.60
Self-employed		p=0.80

Radiation		p=0.14
Surgery		p=0.43
Other		-
Unknown		p=0.27
None		p=0.85
Multiple options could be selected		
Time since diagnosis		
Longer than 2 years		p=0.18
Last 1 year		
Last month		
Last 3 months		
Last 6 months		
Last 2 years		
Frequency missing: 3		





# Discussion

**EWB = Psychological well-being**





(Jacob et al., 2019; Zimmerman et al., 2011)

# Discussion

Sociodemographic factor	 EWB	 EWB
<b>Age</b> (Bagge et al., 2020; Almigbal et al., 2019; Sharma & Purkayastha, 2017)	<b>NO CLEAR LINK</b>	
<b>Gender</b> (Lewandowska et al., 2020; Holzner et al., 2004)		
<b>Marital status</b> (Jayamaha et al., 2021)		
<b>Level of education</b> (Ramasubbu et al., 2020; Jacob et al., 2019; Heydarnejad et al., 2011)		
<b>Employment status</b> (Jacob et al., 2019; Vassilev et al., 2014; Holzner et al., 2004)		





# Discussion

Sociodemographic factor	 EWB	 EWB
<b>Age</b> (Bagge et al., 2020; Almigbal et al., 2019; Sharma & Purkayastha, 2017)	<b>NO CLEAR LINK</b>	
<b>Gender</b> (Lewandowska et al., 2020; Holzner et al., 2004)		
<b>Marital status</b> (Jayamaha et al., 2021)		
<b>Level of education</b> (Ramasubbu et al., 2020; Jacob et al., 2019; Heydarnejad et al., 2011)		
<b>Employment status</b> (Jacob et al., 2019; Vassilev et al., 2014; Holzner et al., 2004)		





# Discussion

Sociodemographic factor	 EWB	 EWB
<b>Age</b> (Bagge et al., 2020; Almigbal et al., 2019; Sharma & Purkayastha, 2017)	<b>NO CLEAR LINK</b>	
<b>Gender</b> (Lewandowska et al., 2020; Holzner et al., 2004)		
<b>Marital status</b> (Jayamaha et al., 2021)		
<b>Level of education</b> (Ramasubbu et al., 2020; Jacob et al., 2019; Heydarnejad et al., 2011)		
<b>Employment status</b> (Jacob et al., 2019; Vassilev et al., 2014; Holzner et al., 2004)		





# Discussion

Sociodemographic factor	 EWB	 EWB
<b>Age</b> (Bagge et al., 2020; Almigbal et al., 2019; Sharma & Purkayastha, 2017)	<b>NO CLEAR LINK</b>	
<b>Gender</b> (Lewandowska et al., 2020; Holzner et al., 2004)		
<b>Marital status</b> (Jayamaha et al., 2021)		
<b>Level of education</b> (Ramasubbu et al., 2020; Jacob et al., 2019; Heydarnejad et al., 2011)		
<b>Employment status</b> (Jacob et al., 2019; Vassilev et al., 2014; Holzner et al., 2004)		





# Discussion

General health factor	 EWB	 EWB
<b>Cancer type</b> (The Cancer Association of South Africa, 2023; Nayak et al., 2017)	Lung / Unsure	Cervical / Bone
<b>Type of treatment</b> (Ramasubbu et al., 2020; Almigbal et al., 2019)	Unsure / No treatment	Chemotherapy / Radiation / Surgery
<b>Time since diagnosis</b> (Lewandowska et al., 2020; Holzner et al., 2004)	Shorter	Longer





# Discussion

General health factor	 EWB	 EWB
<b>Cancer type</b> (The Cancer Association of South Africa, 2023; Nayak et al., 2017)	Lung / Unsure	Cervical / Bone
<b>Type of Treatment</b> (Ramasubbu et al., 2020; Almigbal et al., 2019)	Unsure / No treatment	Chemotherapy / Radiation / Surgery
<b>Time since diagnosis</b> (Lewandowska et al., 2020; Holzner et al., 2004)	Shorter	Longer





# Discussion

General health factor	 EWB	 EWB
<b>Cancer type</b> (The Cancer Association of South Africa, 2023; Nayak et al., 2017)	Lung / Unsure	Cervical / Bone
<b>Type of Treatment</b> (Ramasubbu et al., 2020; Almigbal et al., 2019)	Unsure / No treatment	Chemotherapy / Radiation / Surgery
<b>Time since diagnosis</b> (Lewandowska et al., 2020; Holzner et al., 2004)	Shorter	Longer



# Limitations

1

## **Normative Values for SA**

(Trudel et al., 2021; Bagge et al., 2020; Holzner et al., 2004; Fayers, 2001; Schwarz & Hinz, 2001)

**Participants could  
have lost their  
concentration**

**Afrikaans and Southern Sotho  
FACT-G questionnaires**

**5-point Likert scale**



# Limitations

1

## Normative Values for SA

(Trudel et al., 2021; Bagge et al., 2020; Holzner et al., 2004; Fayers, 2001; Schwarz & Hinz, 2001)

**Participants could have lost their concentration**

2

## Afrikaans and Southern Sotho FACT-G questionnaires

**5-point Likert scale**



# Limitations

1

## Normative Values for SA

(Trudel et al., 2021; Bagge et al., 2020; Holzner et al., 2004; Fayers, 2001; Schwarz & Hinz, 2001)

Participants could  
have lost their  
concentration

3

2

Afrikaans and Southern Sotho  
FACT-G questionnaires

5-point Likert scale



# Limitations

1

## Normative Values for SA

(Trudel et al., 2021; Bagge et al., 2020; Holzner et al., 2004; Fayers, 2001; Schwarz & Hinz, 2001)

Participants could  
have lost their  
concentration

3

2

Afrikaans and Southern Sotho  
FACT-G questionnaires

5-point Likert scale

4



# Recommendations

## Normative data

HRQoL & EWB scores

## Physiotherapists

Interventions



## Questionnaires

Self-developed questionnaire  
Afrikaans and Southern Sotho  
FACT-G versions

## Qualitative research

Deeper insights



# Conclusion

## HRQoL and well-being assessments

**No associations**

**Some factors might affect EWB negatively**

**Role of Physiotherapy**



# Conclusion

**HRQoL and well-being assessments**

**No associations**

**Some factors might affect EWB negatively**

**Role of Physiotherapy**





# Conclusion

**HRQoL and well-being assessments**

**No associations**

**Some factors might affect EWB negatively**

**Role of Physiotherapy**



# Conclusion

**HRQoL and well-being assessments**

**No associations**

**Some factors might affect EWB negatively**

**Role of Physiotherapy**



# Acknowledgments

## **Prof Alicia Sherriff**

Head of Oncology at Universitas Annex

## **The Patients at Universitas Annex**

In the wards and the follow-up clinic

## **The Matrons of Universitas Annex**

Matron Scorrano of the wards and Matron April of the clinic

## **The Staff of Universitas Annex**

## **Dr Roline Barnes**

Compiled the final protocol for the larger research study

## **Ms Riëtte Nel**

Biostatititan responsible for the data analysis



# References

All photos are courtesy of Google Images

- Almigbal, T.H., Almutairi, K.M., Fu, J.B., Vinluan, J.M., Alhelih, E., Alonazi, W.B., Batais, M.A., Alodhayani, A.A. & Mubarak, M.A. 2019. Assessment of psychological distress among cancer patients undergoing radiotherapy in Saudi Arabia. *Psychology Research and Behaviour Management*, 12:691-700.
- Ashcraft, K.A., Warner, A.B., Jones, L.W. & Dewhirst, M.W. 2019. Exercise as an adjunct therapy in cancer. *Seminars in Radiation Oncology*, 29(1):16-24.
- Bagge, A.L., Carlander, A., Fahlke, C. & Bagge, R.O. 2020. Health-related quality of life (FACT-GP) in Sweden. *Health and Quality of Life Outcomes*, 18:172.
- Bennet, A.E., O'Neill, L., Connolly, D., Guinan, E.M., Boland, L., Doyle, S.L., O'Sullivan, J., Reynolds, J.V. & Hussey, J. 2018. Patient experiences of a physiotherapy-led multidisciplinary rehabilitative intervention after successful treatment for oesophago-gastric cancer. *Supportive Care in Cancer*, 26:2615-2623.
- Eyigor, S. & Akdeniz, S. 2014. Is exercise ignored in palliative cancer patients? *World Journal of Clinical Oncology*, 5(3): 554-559.
- Fayers, P.M. 2001. Interpreting quality of life data: population-based reference data for the EORTC QLQ-C30. *European Journal of Cancer*, 37:1331-1334.
- Heydarnejad, M.S., Hassanour, D.A. & Solati, D.K. 2011. Factors affecting quality of life in cancer patients undergoing chemotherapy. *African Health Sciences*, 11(2):266-270.
- Holzner, B., Kemmler, G., Cella, D., Da Paoli, C., Meraner, V., Kopp, M., Greil, R., Fleischhacker, W.W. & Sperner-Unteregger, B. 2004. Normative Data for Functional Assessment of Cancer Therapy General Scale and its Use for the Interpretation of Quality of Life Scores in Cancer Survivors. *Acta Oncologica*, 43(2):153-160.
- Jacob, J., Palat, G., Verghese, N., Chandran, P., Rapelli, V., Kumari, S., Malhotra, C., Teo, I., Finkelstein, E. & Ozdemir, S. 2019. Health-related quality of life and its socioeconomic and cultural predictors among advanced cancer patients: evidence from the Approach cross-sectional survey in Hyderabad-India. *BMC Palliative Care*, 18:94.



# References

- Jayamaha, S.D., Overall, N.C., Girmé, Y.U., Hammond, M.D & Fletcher G.J.O. 2021. Depressive symptoms, stress, and poorer emotional support when needed by intimate partners. *Emotion*, 21(6):1160-1176.
- Jerath, R., Crawford, M.W., Barnes, V.A. & Harden, K. 2015. Self-Regulation of Breathing as a Primary Treatment for Anxiety. *Applied Psychophysiology and Biofeedback*, 40:107-115.
- Karimi, M. & Brazier, J. 2016. Health, Health-Related Quality of Life, and Quality of Life: What is the Difference? *Pharmacoeconomics*, 34:645-649.
- Lamers, S.M.A., Bolier, L., Westerhof, G.J., Smit, F. & Bohlmeijer, E.T. 2012. The Impact of Emotional Well-Being on long-term recovery and survival in physical illness: a meta-analysis, *Journal of Behavioural Medicine*, 35:538-547.
- Lavin-Pérez, A.M., Collado-Mateo, D., Mayo, X., Liguori, G., Humphreys, L., Copeland, R.J. & Jiménez, A. 2021. Effects of high-intensity training on the quality of life of cancer patients and survivors: a systematic review and meta-analysis, *Scientific Reports*, 11:15089.
- Lewandowska, A., Rudzki, G., Lewandowski, T., Próchnicki, M., Rudzki, S., Laskowska, B. & Brudniak, J. 2020. Quality of Life of Cancer Patients Treated with Chemotherapy. *International of Environmental Research and Public Health*, 17, 6938.
- Mishra, S., Scherer, R., Geigle, P., Berlanstein, D., Topaloglu, O., Gotay, C. & Snyder, C. 2012. Exercise interventions on health-related quality of life for cancer survivors. *Cochrane Database of Systematic Reviews*, 8:2-81.
- Nayak M.G., George, A., Vidyasagar, M.S., Mathew, S., Nayak, S., Nayak, B.S., Shashidhara, Y.N. & Kamath, A. 2017. Quality of Life among Cancer Patients. *Indian Journal of Palliative Care*, 23:445-450.
- Nedjat-Haiem, F.R., Cadet, T., Parada, H., Jones, T., Jimenez, E.E., Thompson, B., Wells, K.J. & Mishra, S.I. 2021. Financial Hardship and Health Related Quality of life Among Older Latinos With Chronic Diseases. *American Journal of Hospice & Palliative Medicine*, 38(8):938-946.



# References

Ozalevli, S. 2013. Impact of physiotherapy on patients with advanced lung cancer. *Chronic Respiratory Disease*, 10(4):223-232.

Odynets, T., Briskin, Y. & Todorova, V. 2019. Effects of Different Exercise Interventions on Quality of Life in Breast Cancer Patients: A Randomized Controlled Trial. *Integrative Cancer Therapies*, 18:1-8.

Pattanshetty, R.B. & Chopde, C. 2016. Role of Physiotherapy in Cancer-Related Fatigue in Cancer Survivors – A Narrative Review. *Journal of Novel Physiotherapy and Physical Rehabilitation*, 3(1):30-34.

Probst, M. 2017. Physiotherapy and Mental Health: Clinical Physical Therapy, Intech, 9:179- 204.

Ramasubbu, S.K., Pasricha, R.K., Nath, U.K., Rawat, V.S. & Das, B. 2020. Quality of life and factors affecting it in adult cancer patients undergoing cancer chemotherapy in a tertiary care hospital. *Cancer reports*, 4.

Rizzo, A. 2016. The Role of Exercise and Rehabilitation in the Cancer Care Plan. *Journal of the Advanced Practitioner in Oncology*, 7(3):339-342

Schwarz, R. & Hinz, A. 2001. Reference data for the quality of life questionnaire EORTC QLQ-C30 in the general German population. *European Journal of Cancer*, 37:1345-1351.

Sharma, N. & Purkayastha, A. 2017. Factors affecting Quality of Life in Breast Cancer Patients: A Descriptive and Cross-sectional Study and Review of Literature. *Journal of Mid-life Health*, 8:75-83.

Simsek, O.F. 2011. An Intensional Model of Emotional Well-Being: The Development and Initial Validation of a Measure of Subjective Well-Being. *Journal of Happiness Studies*, 12(3):421-442.

The Cancer Association of South Africa. 2023. Cervical Cancer. <https://cansa.org.za/cervical-cancer/> [30 July 2023]

# References

- Traeger, L., Penedo, F.J., Gonzalez, J.S., Dahn, J.R., Lechner, S.C., Schneiderman, N. & Antoni, M.H. 2009. Illness perceptions and emotional well-being in men treated for localized prostate cancer. *Journal of Psychosomatic Research*, 67:389-397.
- Trudel, J., McLarty, R. & Maciejewski, C. 2021. Comparison of FACT-G scores with cancer and general population norms in Canadian patients undergoing radical cystectomy. *The Journal of Urology*, 206(3).
- Trudel-Fitzgerald, C., Millstein, R.A., von Hippel, C., Channele J. Howe, C., Powers Tomasso, L., Wagner, G.R. & VanderWeele, T.J. 2019. Psychological well-being as part of the public health debate? Insight into dimensions, interventions, and policy. *BCM Public Health*, 19(1):1712.
- Vassilev I., Rogers A., Sanders C., Cheraghi-Sohi S., Blickem C., Brooks H., Kapadia D., Reeves D., Doran T. & Kennedy A. 2014. Social status and living with a chronic illness: An exploration of assessment and meaning attributed to work and employment. *Chronic Illness*, 10(4):273-290.
- World Health Organisation, International Agency for Research on Cancer. 2023. Cancer Tomorrow.
- [https://gco.iarc.fr/tomorrow/en/dataviz/bars?mode=population&populations=903\\_904\\_905\\_908\\_909\\_935&cancers=39&bar\\_mode=grouped](https://gco.iarc.fr/tomorrow/en/dataviz/bars?mode=population&populations=903_904_905_908_909_935&cancers=39&bar_mode=grouped) [19 March 2023].
- Zimmerman, C., Burman, D., Swami, N., Krzyzanowska, M.K., Leighl, N., Moore, M., Rodin, G. & Tannock, I. 2011. Determinants of quality of life in patients with advanced cancer. *Support Care Cancer*, 19:621-629.
- Zyzniewska-Banaszak, E., Kucharska-Mazur, J. & Mazur, A. 2021. Physiotherapy and Physical Activity as Factors Improving the Psychological State of Patients with Cancer. *Frontiers In Psychiatry*, 12(772694).





**THANK YOU**





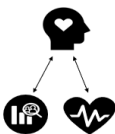
# Results

Marital Status	Quartile 1 n (%)	Quartile 2 n (%)	Quartile 3 n (%)	Quartile 4 n (%)
Married	44 (22.9)	50 (26.0)	46 (24.0)	52 (27.1)
Single, not married	33 (27.7)	26 (21.9)	24 (20.2)	36 (30.3)
Widowed	14 (18.7)	18 (24.0)	20 (26.7)	23 (30.7)
Divorced	5 (12.8)	11 (28.2)	10 (25.6)	13 (33.3)
In a relationship, not married	11 (29.0)	12 (31.6)	8 (21.1)	7 (18.4)
Live with a partner, not married	4 (20.0)	10 (50.0)	4 (20.0)	2 (10.0)
Separated	7 (58.3)	3 (25.0)	2 (16.7)	0 (0)
Prefer not to answer	1 (16.7)	1 (16.7)	3 (50.0)	1 (16.7)



# Results

Highest Level of Education	Quartile 1 n (%)	Quartile 2 n (%)	Quartile 3 n (%)	Quartile 4 n (%)
Secondary school	63 (22.1)	75 (26.3)	72 (25.3)	75 (26.3)
Tertiary school	25 (24.5)	22(21.6)	25 (24.5)	30 (29.4)
Primary School	21 (24.4)	26 (30.2)	16 (18.6)	23 (26.7)
No schooling	7 (28.0)	9 (36.0)	3 (12.0)	6 (24.0)
Prefer not to answer	5 (62.5)	0 (0.0)	1 (12.5)	2 (25.0)



# Results

Employment status	Quartile 1 n (%)	Quartile 2 n (%)	Quartile 3 n (%)	Quartile 4 n (%)
Pensioner	47 (23.7)	55 (27.8)	41 (20.7)	55 (27.8)
Unemployed	48 (27.9)	39 (22.7)	37 (21.5)	48 (27.9)
Full time	9 (12.9)	23 (32.9)	20 (28.6)	18 (25.7)
Piece job	6 (23.1)	6 (23.1)	9 (34.6)	5 (19.2)
Part-time	8 (33.3)	4 (16.7)	5 (20.8)	7 (29.2)
Self-employed	4 (17.4)	6 (26.1)	7 (30.4)	6 (26.1)



# Results

EWB domain in the FACT-G questionnaire		Not at all	A little bit	Somewhat	Quite a bit	Very much	
GE1	I feel sad	0	1	2	3	4	41.2%
GE2	I am satisfied with how I am coping with my illness	0	1	2	3	4	50.2%
GE3	I am losing hope in the fight against my illness	0	1	2	3	4	65.9%
GE4	I feel nervous	0	1	2	3	4	48.1%
GE5	I worry about dying	0	1	2	3	4	56.8%
GE6	I worry that my condition will get worse	0	1	2	3	4	46.8%

