Yes We Can!
Trauma Nurses' Knowledge and Perceived Impact on Health-Related Quality of Life

Lily Silverstein, BSN, RN

Jacob Higgins, PhD, RN

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Conflicts of Interest

- The authors have no conflicts of interest, financial or otherwise, to disclose.

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Background & Gap

- Health-Related Quality of Life (HRQoL) is a person's self-assessed mental and physical health state over time

- Following traumatic injury, HRQOL is severely and persistently decreased, though HRQoL may potentially be modified by targeted intervention

- NASEM has advocated for the adoption of HRQoL as a quality marker for trauma care

- Barriers to implementation of HRQoL-directed care in the US have been identified
    - Lack of data regarding long-term HRQoL;
    - Lack of continuity of care from hospital to community; and
    - Stigma of seeking mental or behavioral healthcare

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- Berwick et al., *NASEM NAP*, 2016
- CDC, 2018
- Hoge et al., *JAMA*, 2006
- Silverstein et al., *JTN*, 2021

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Background & Gap

- Research investigating clinician knowledge of HRQoL or integration of HRQoL into practice is scarce
  - Primarily relates to physicians
- Nursing research in this area is even more limited
  - Focused on oncology nursing
- Investigation of trauma clinicians' familiarity with HRQoL is conspicuously absent from the literature
- **To systematically incorporate HRQoL metrics into trauma care, trauma clinicians, including nurses, must have knowledge and understanding of HRQoL as a concept**

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- Bezjak et al., *QOL Rsrch*, 2001
- Bossola et al., *Hlth and QOL Otcms*, 2010
- Calvert & Skelton, *BMC Med Ed*, 2008
- Lindley & Hirsch, *Onc Nur Forum*, 1994
- Schmick et al., *BMC Uro*, 2017

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Purpose

- To assess trauma nurses' knowledge and perceptions of HRQoL, and

- To examine factors that contribute to trauma nurses' agreement that clinical care can impact HRQoL

Methods

Design

- Correlational study utilizing a cross-sectional electronic survey (Qualtrics)

Sample

- Two purposive samples:
  - RNs employed on the trauma-surgical service line at UK HealthCare who could read and write in English (n = 73)
  - Nursing professional (RN or APRN) who self-identify as a trauma care provider who receive emails and/or engage in social media with STN/JTN who could read and write in English (n = 402)

Methods

Survey Development

- Based on search of existing literature which surveyed clinician knowledge and perceptions of HRQoL in acute care setting

- Drew from authors' previously published systematic review of literature of HRQoL after polytrauma

- 26-items, approximately 10 minutes to complete
  - Three blocks: Professional Demographic, Knowledge of HRQoL, Perceptions of HRQoL

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Methods

Data Collection

- eIRB # 62017 (University of Kentucky)
- Anonymous link (Qualtrics)
  - Local listserv distribution: October 2020 – December 2020, three invitations
  - STN/JTN distribution: May 2021 – July 2021, three invitations
  - Closed July 31, 2021

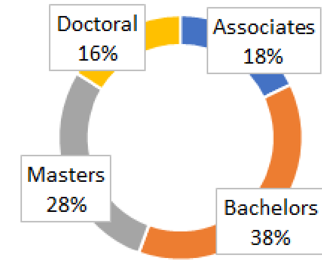
Analysis

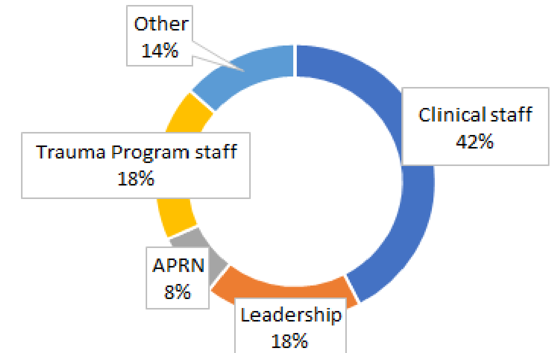
- Descriptive statistics
- Multivariate, hierarchical regression to assess professional demographic, knowledge, and perceptive contributions towards trauma nurse agreement that clinical care can impact HRQoL

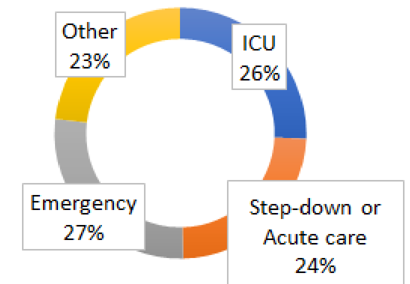
Descriptive Results:

Professional & Demographic characteristics

- Most (66%) of the respondents identified as female
- Mean years of nursing experience = 21.7 ± 13.8
- Most (38%) were employed at a verified Level I institution
- Most were in an urban (51%) setting in the southern US (39%)
- 42% were unsure if their institution collected HRQoL data about trauma patients







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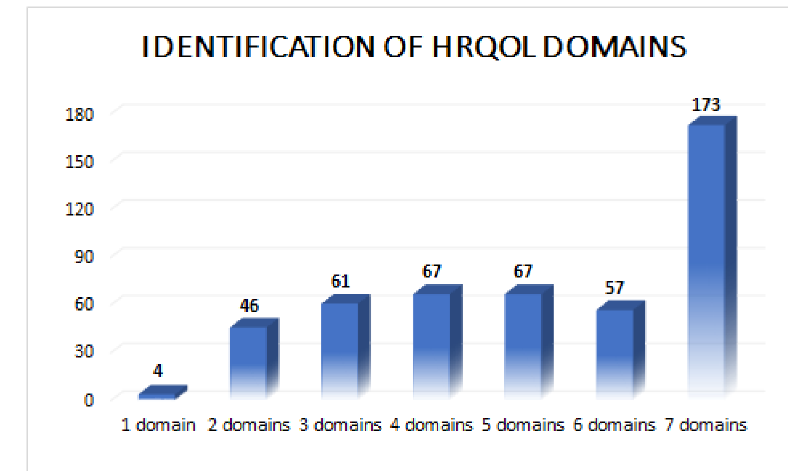
Descriptive Results:

HRQoL Knowledge

- Over half (54%) of respondents were ***not*** familiar with HRQoL
- Most (65%) respondents believed HRQoL to be different from QoL
- Almost half (48%) correctly identified who provides answers to HRQoL questions
- Just over half (51%) correctly identified how HRQoL is measured

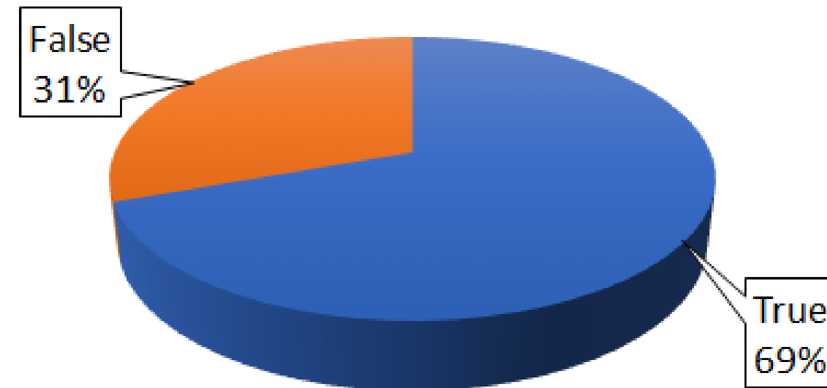
The domains that make up HRQoL include which of the following? Select all that apply:

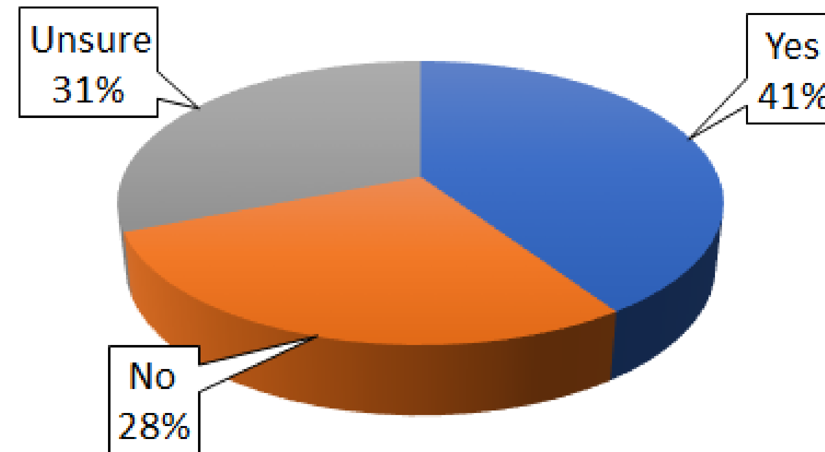
- Physical functioning
- Emotional functioning
- Social functioning
- Mental well-being
- Pain / discomfort
- Energy level
- Self-care and usual activities



Descriptive Results:

Perceptions of HRQoL





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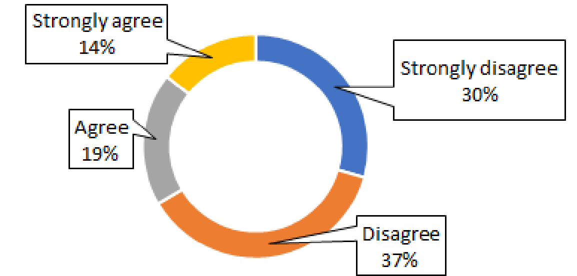
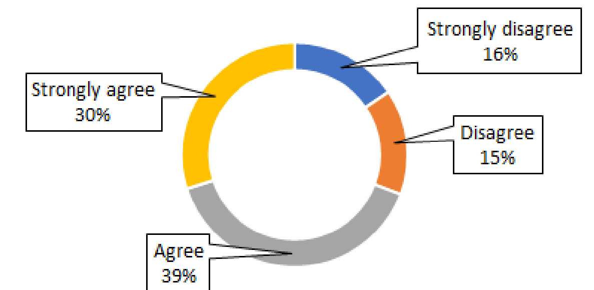
Descriptive Results:

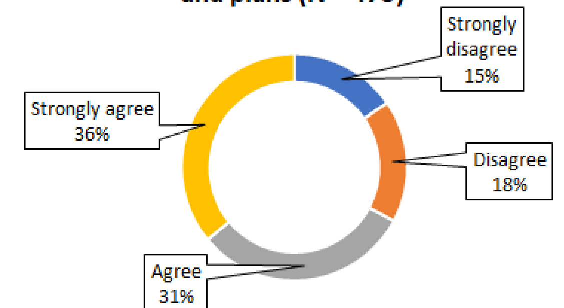
Perceptions of HRQoL and hospitalization

- Majority of respondents agreed (35%) or strongly agreed (21%) with "***Preserving life is the primary responsibility of health care workers.***"

- Majority of respondents disagreed (37%) or strongly disagreed (30%) with "***Preserving life regardless of the effect on HRQoL is a marker of successful health care delivery***."







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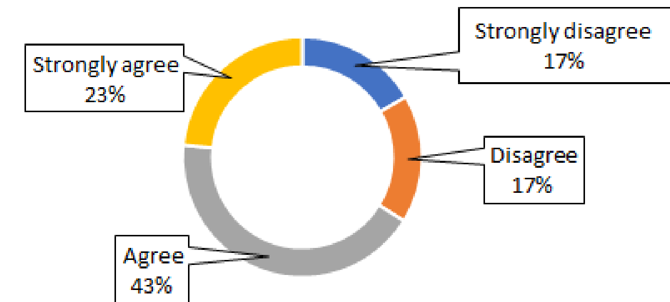
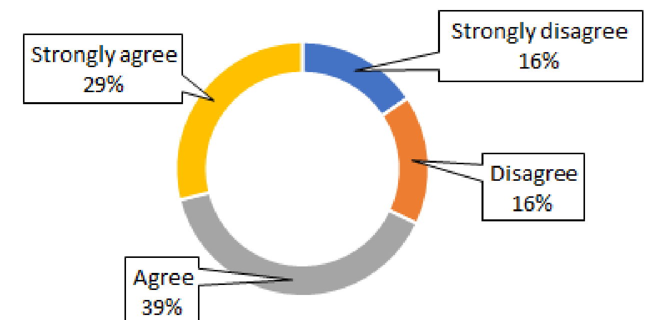
Descriptive Results:

Perceptions of HRQoL and Nursing

- There was **moderate** (63.7 ± 29.8) agreement with the statement "*Nursing care delivered during hospitalization for traumatic injury can affect HRQoL*" (Scale 0 – 100, 100 represents complete agreement)





Regression Results Block 1: *Professional Demographic factors*

Predictors of agreement towards the statement: Nursing care, delivered during hospitalization for traumatic injury, can affect HRQoL.	B	β	p-value	95% CI
BSN (ADN/ASN referent)	9.33	0.15	0.01	[2.03, 16.63]
Trauma program staff (Management/leadership referent)	12.54	0.16	0.003	[4.16, 20.92]
Work at Level II (Level I referent)	-10.57	-0.14	0.009	[-18.48, -2.66]
Work at Level IV (Level I referent)	-15.75	-0.16	0.001	[-25.16, -6.34]
Work at Level V (Level I referent)	-19.39	-0.21	<0.001	[-28.81, -9.97]
Work at non-verified center (Level I referent)	-12.33	-0.13	0.008	[-21.43, -3.22]
Rural setting (Urban referent)	-6.99	-0.10	0.046	[-13.86, -0.13]
Institution does not collect HRQoL (Institution does collect referent)	8.82	0.14	0.01	[1.83, 16.05]
Unsure if institution collects HRQoL (Institution does collect referent)	8.94	0.15	0.1	[1.78, 15.86]

Note: HRQoL = health related quality of life; BSN = Bachelor of Science in Nursing; ADN = Associates Degree in Nursing
Model statistics: $F(23, 448) = 4.95$; $p < 0.001$; Adjusted $R^2 = 0.162$

Regression Results Block 2: *Knowledge factors*

Predictors of agreement towards the statement: Nursing care, delivered during hospitalization for traumatic injury, can affect HRQoL.	B	β	p-value	95% CI
HRQoL measured by chart review (Patient report with valid instrument referent)	-11.55	-0.16	0.001	[-18.60, -4.50]
HRQoL measured by HCP observation (Patient report with valid instrument referent)	-10.54	-0.16	0.001	[-16.96, -4.13]
Identified 2 of 7 domains (Identified 7 of 7 referent)	-12.01	-0.12	0.014	[-21.55, -2.46]
Identified 3 of 7 domains (Identified 7 of 7 referent)	-10.86	-0.12	0.011	[-19.19, -2.52]
Identified 5 of 7 domains (Identified 7 of 7 referent)	-13.19	-0.16	0.001	[-21.05, -5.33]
Identified 6 of 7 domains (Identified 7 of 7 referent)	-14.62	-0.16	0.001	[-23.12, -6.12]

Note: HRQoL = health related quality of life; HCP = health care provider
Model statistics: $F(14, 434) = 4.44$; $p < 0.001$; Adjusted $R^2 = 0.243$

Regression Results Block 3: *Perceptive factors*

Predictors of agreement towards the statement: Nursing care, delivered during hospitalization for traumatic injury, can affect HRQoL.	B	β	p-value	95% CI
Agree with statement "***Discussions regarding HRQoL during hospitalization can have positive impact on patient experience and outcomes***" (Strongly disagree referent)	13.86	0.23	0.001	[6.04, 21.67]
Strongly agree with statement "***Discussions regarding HRQoL during hospitalization can have positive impact on patient experience and outcomes***" (Strongly disagree referent)	10.01	0.16	0.012	[2.2, 18.0]
Agree with statement "***If I received further education on HRQoL, I feel it could impact my nursing practice to improve patient outcomes***" (Strongly disagree referent)	8.89	0.15	0.024	[1.16, 16.62]
Strongly agree with statement "***If I received further education on HRQoL, I feel it could impact my nursing practice to improve patient outcomes***" (Strongly disagree referent)	14.63	0.22	<0.001	[6.68, 22.59]

Note: HRQoL = health related quality of life
Model statistics: $F(24, 410) = 2.98$; $p < 0.001$; Adjusted $R^2 = 0.318$

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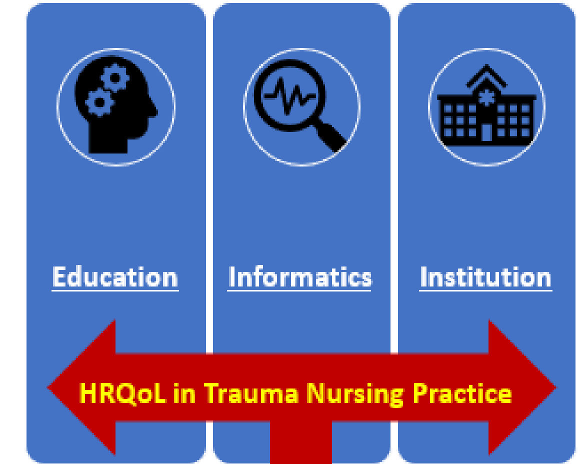
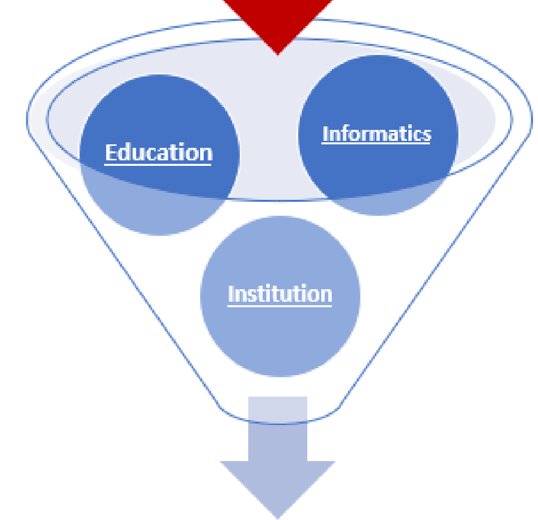
Conclusions & Future Implications for Practice

- Trauma nurses perceived that nursing care can impact patient HRQoL

- The perceived impact is affected by components that can be grouped into education, informatics, and institution factors

- Leveraging feedback from each component of the trauma nurse's perception of impact to inform other components could assist in the development, implementation, and testing of holistic, nurse-led interventions that improve HRQoL of trauma patients





Nurse-led Interventions that improve HRQoL of Trauma Patients

- AACN, 2001
- Abbasinia et al., *Nrsng Ethics*, 2020
- ACS, 2014
- Beecher & Meredith, *NC Med Jrnl*, 2010
- Blackmore et al., *JTN*, 2019
- Curtis et al., *Injury*, 2020
- Graham et al., *J Cnt Ed for Health Pro*, 2006
- Gosnell & Slivinski, *JTN*, 2021
- Haley et al., *JTN*, 2017
- Heyland et al., *Open Med*, 2009
- Perrin & Mitchell, *Med Care*, 1997
- You et al., *CMAJ*, 2014

Acknowledgments

- *Society of Trauma Nurses*
  - Stephanie Czuhajewski
  - Brian Doty
  - Member participants
- *Journal of Trauma Nursing*
  - Valerie Brockman
  - Subscriber participants