

Yes We Can!

Trauma Nurses Knowledge and Perceived Impact on Health-Related Quality of Life

Lily Silverstein^{1,2}, BSN, RN, Jacob Higgins^{1,2}, PhD, RN

1. University of Kentucky, College of Nursing
2. UK HealthCare



INTRODUCTION:

- Health-Related Quality of Life (HRQoL) is a person's self-assessed mental and physical health state
- Following traumatic injury, HRQoL may be severely and persistently decreased, though HRQoL may potentially be modified by targeted intervention
- Despite recommendations from the National Academies of Sciences, Engineering, and Medicine which advocated for the adoption of HRQoL as a quality marker for trauma care, this has not been systematically implemented
- Research investigating clinician knowledge of HRQoL or integration of HRQoL into practice is scarce and primarily relates to physicians
 - Research regarding trauma clinicians in this area is similarly sparse
- To systematically incorporate HRQoL metrics into trauma care, trauma clinicians, including nurses, must gain knowledge and understanding of HRQoL as a concept

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

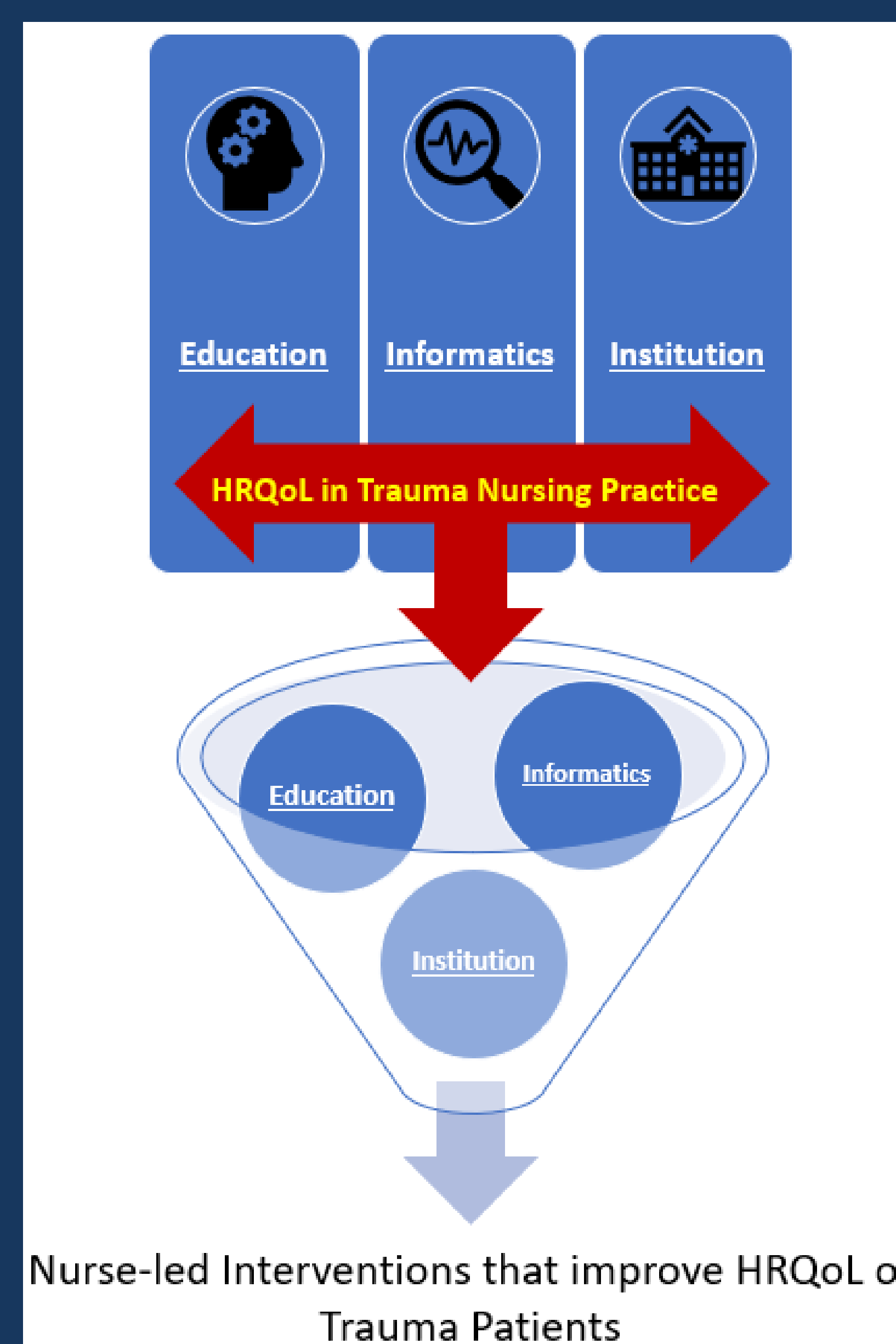
METHODS

- Design
 - Correlational study utilizing a cross-sectional electronic survey
- Sample
 - Two purposive samples invited to participate via Qualtrics link
 - 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)
- Survey Development :
 - 26-items derived from literature, approximately 10 minutes to complete
 - Three blocks: Professional Demographic, Knowledge of HRQoL, Perceptions of HRQoL
- Data Collection
 - eIRB #62017 (University of Kentucky)
 - Anonymous link (Qualtrics)
 - Local distribution: October 2020 – December 2020, 3 invitations
 - STN/JTN distribution: May 2021 – July 2021, 3 invitations
- Analysis
 - Descriptive statistics
 - Multivariate, hierarchical regression to assess professional demographic, knowledge, and perceptive contributions towards trauma nurse agreement that clinical care can impact HRQoL

References:

- AACN, 2001
- Abbasinia et al., Nrsng Ethics, 2020
- ACS, 2014
- Beecher & Meredith, NC Med Jnl, 2010
- Bezjak et al., QOL Rsrch, 2001
- Blackmore et al., JTN, 2019
- Bossola et al., Hlth and QOL Otcms, 2010
- Calvert & Skelton, BMC Med Ed, 2008
- 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
- Lindley & Hirsch, Onc Nur Forum, 1994
- Perrin & Mitchell, Med Care, 1997
- Schmick et al., BMC Uro, 2017
- Silverstein et al., JTN, 2021
- You et al., CMAJ, 2014

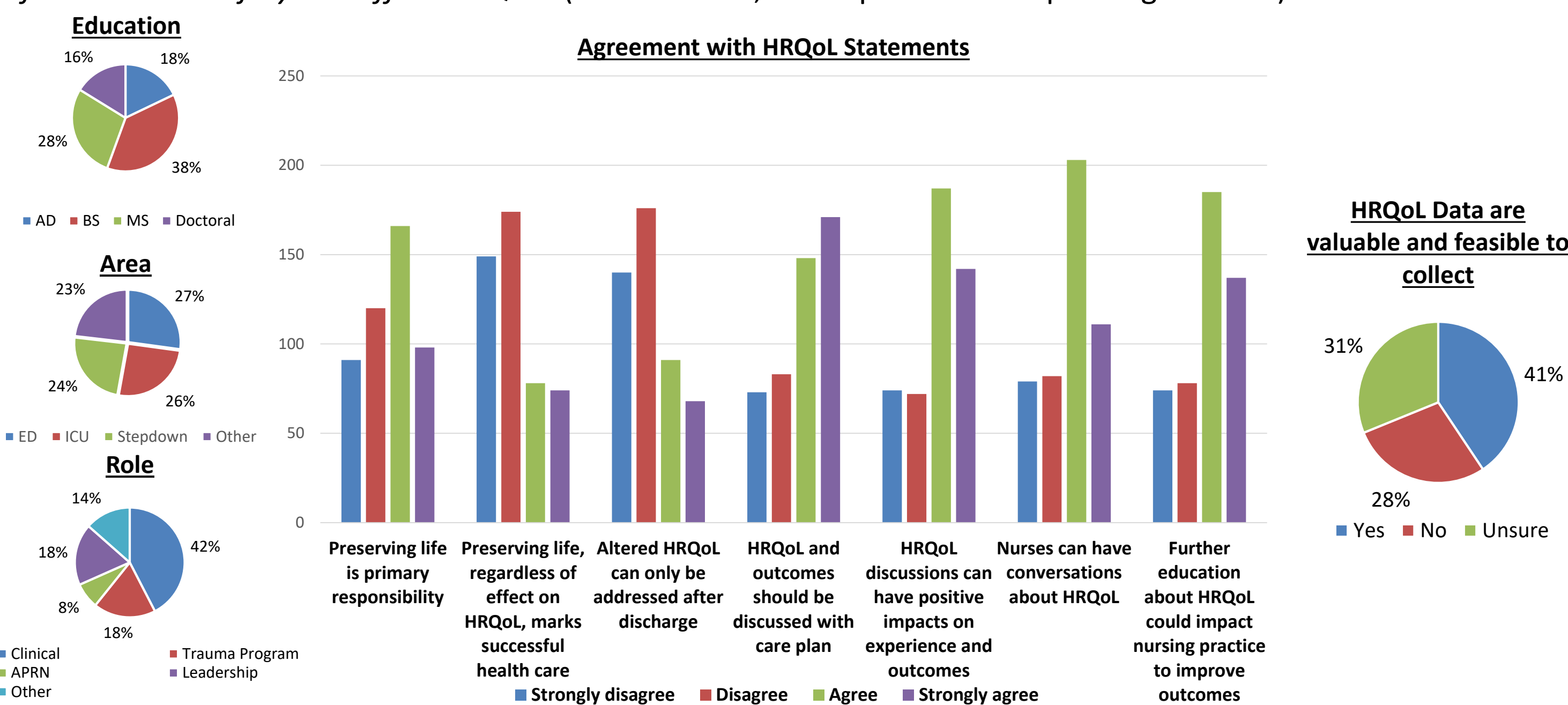
Trauma nurses perceive that they can impact patients' health-related quality of life during hospitalization. Directed efforts towards increasing education, leveraging informatics, and addressing institutional factors may further facilitate the perceived impact trauma nurses can have on patient health-related quality of life.



RESULTS:

Descriptive

- 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 in urban (51%) settings in the southern US (39%)
- 42% were unsure if their institution collected HRQoL data about trauma patients
- Over half (54%) of respondents were **not** familiar with HRQoL
- Almost half (48%) correctly identified who provides answers to HRQoL questions
- Just over half (51%) correctly identified how HRQoL is measured
- 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

Professional demographic predictors of agreement towards the statement: Nursing care, delivered during hospitalization for traumatic injury, can affect HRQoL.

	B	β	p	95% CI
BSN (ADN/ASN referent)	9.33	0.15	0.01	[2.03, 16.63]
Trauma program staff (Management 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 R² = 0.162

Knowledge predictors of agreement towards the statement: Nursing care, delivered during hospitalization for traumatic injury, can affect HRQoL.

	B	β	p	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 R² = 0.243

Perceptive predictors of agreement towards the statement: Nursing care, delivered during hospitalization for traumatic injury, can affect HRQoL.

	B	β	p	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 R² = 0.318

Conclusion & Implications

- 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 (Figure 1).

Figure 1