The Medical Student Check-In Survey to Assess Student Wellness: What Our Students Say and What WSUSOM Can Do

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BACKGROUND

- Studies of North American medical students show a higher prevalence of anxiety & depression than age-matched peers.[1]
- Burnout impacts clinical practice, including reduced empathy, patient satisfaction, and productivity.[2-3]
- These studies demonstrate the need for greater understanding of influences on physician wellbeing from the start of medical training.
- We describe the recently validated Medical Student Check-in Survey (MSCIS) to better understand these important influences.

AIMS

1. Review the process of creating and validating a new tool to measure wellbeing.
2. Share findings as they relate to informed changes specific to WSUSOM which positively impact our students' wellbeing.
3. Discuss implications for informed institutional changes.

METHODS

- Faculty and medical students collaborated to develop the MSCIS, a novel scale derived from the published and validated Resident Wellness Scale (RWS).[4]
- The MSCIS is designed to measure frequencies of behaviors and thoughts indicative of student wellbeing and purposefully uses neutral/positive language in its title and questions with the intent of measurement without the use of labels.
- Preliminary validity of the MSCIS with the MSLES (a well-used instrument measuring medical students' perceptions of their learning environment)[5] was presented at AAMC 2020.
- The MSCIS was sent to all WSUSOM students with a 93-96% response rate.
- Data from 1,023 completed surveys was analyzed and missing data was imputed using listwise means.
- An Exploratory Factor Analysis (EFA) was conducted on a randomly selected half of the dataset. A parallel analysis using Glorfeld's improvement to Horn's method[6] indicated 5 non-orthogonal factors. An EFA found the 5-factor minres solution on the correlation matrix with oblimin rotation.
- A Confirmatory Factor Analysis (CFA) was conducted to test the results of the EFA using the other half of the data. The 5-factor solution was supported with Chi-squared (df = 65) = 204.01 ($p < .0001$), TLI = .92, CFI = .95, and RMSEA = .06.

MAIN TAKE HOME POINTS

✓The novel Medical Student Check In Survey measures 5 factors of student wellness, 3 of which change across medical school years.

✓Understanding influences on student wellness can drive effective institutional change.

RESULTS

- Five factors of student wellness as measured by the MSCIS scale:
  1) Personal Confidence
  2) Hedonic Well-Being (Happiness and basic needs)
  3) Social Support
  4) Knew Who to Call In Case of Emergency
  5) Euodaimonic Well-Being (Meaningful work & institutional support)

Table 1: Factor loadings of a 5-factor model of the scale. Loadings stronger than .30 are highlighted and used to compute subscores.

Item	Personal Confidence	Hedonic Well-Being	Social Support	Knew Who to Call	Euodaimonic Well-Being
Felt confident in your ability to become a doctor	0.81	0.07	-0.03	0.01	-0.04
Felt confident you would do well on your exams	0.72	-0.05	0.00	0.03	-0.01
Were proud of the work you did	0.52	0.01	0.20	-0.07	0.15
Were eager to come back to work the next day	0.32	0.09	0.12	0.03	0.32
Felt connected to your work in a deep sense	0.31	0.07	0.06	0.15	0.41
Felt happy	0.00	0.89	0.06	-0.02	-0.01
Engaged in a favorite hobby	-0.01	0.68	-0.03	0.05	-0.02
Felt your basic needs were met including eating and sleeping well	0.05	0.59	-0.12	0.01	0.12
Felt supported by your colleagues	-0.02	0.01	0.81	0.02	-0.02
Had an enjoyable interaction with a patient or colleague	0.08	-0.01	0.59	0.00	0.12
Felt supported by your friends and family outside of medical school	0.07	0.18	0.46	0.09	-0.13
Felt supported by the faculty staff and administration at the medical school	-0.02	0.10	0.34	0.06	0.35
Knew who to call when an adverse event occurred	0.00	0.00	0.00	1.00	0.00
Reflected on how your current efforts help make the world a better place	-0.03	0.03	0.00	0.00	0.68
Thought about another line of work	-0.22	-0.18	-0.05	0.09	0.12

- 3 factors change across years of medical school
  - Personal Confidence rises after Year 1
  - Hedonic Well-Being rises in Year 4
  - Knew Who to Call drops in Years 3 and 4
- 2 factors (social support and euodaimonic well-being) do not change

Table 2: Mean subscores by training year (with F-test of year). Highlighted boxes indicate statistical significant difference from Year 1.

Fact	Year 1	Year 2	Year 3	Year 4	F-test	sig.
Personal Confidence	3.24	3.49	3.40	3.44	F(3,1019) = 4.75	YES
Hedonic Well-Being	3.44	3.56	3.39	3.86	F(3,1019) = 16.66	YES
Social Support	3.72	3.74	3.85	3.83	F(3,1019) = 2.43	No
Knew Who to Call	3.56	3.70	3.01	3.28	F(3,1019) = 10.28	YES
Euodaimonic Well-Being	3.19	3.21	3.24	3.31	F(3,1019) = 1.25	No

WSUSOM INSTITUTIONAL CHANGES

- ✓ Wellness taskforce with student members from every year
- ✓ Director of Health and Wellness
- ✓ Wellness placed directly in the curriculum of every class
- ✓ Mental Health First Aid Training for all M1 students
- ✓ Optional student-driven initiatives with virtual options
- ✓ Walk-with-a-Doc mentorship program
- ✓ Curriculum recommendations to enhance student wellness
- ✓ Decreased contact hours during M1 and M2
- ✓ Wellness afternoons during M3 year
- ✓ Time off for appointments
- ✓ Expansion of learning communities
- ✓ School-wide surveys for student feedback
- ✓ Class-wide surveys for student engagement & feedback
- ✓ Additional support options with Early Alert and MyMDtoBe
- ✓ Warriors Strong with both support and treatment options

DISCUSSION/CONCLUSIONS

- Students' sense of wellbeing is influenced by multiple factors; although the process is complex we are able to measure distinct impactful elements.
- Continuing to provide this survey annually will lead to ability to measure how these factors trend across the same cohort of students and correlate with institutional changes.
- Understanding the impact of students' perceptions of learning environment and level of training on perceptions of wellbeing can guide effective institutional changes that cultivate joy in medicine.
- Possible future interventions based on this data include:
  - More support from clinical sites to 3rd & 4th year medical students
  - Heightened attention to basic needs (financial, living conditions, food, sleep)
  - Increase in curriculum transparency/intention
  - Increase in communication and resources
- This data can inform medical school leadership for potential future interventions both at WSUSOM and, with future research, at other medical institutions
- Our focus remains to support WSUSOM students and continue to improve the environment in which they become physicians.

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