

A modified MBSR curriculum is effective in reducing burnout among PA students

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Background

Students experience **increased stress and decreased ability to tolerate the inherent ambiguities** in learning medicine, accentuated by COVID-19 pandemic.¹

Without preparing students for these ambiguous scenarios, the higher levels of stress increase longitudinally, which may lead to **burnout and depression**.^{2,3}

Mindfulness and **mindfulness-based stress reduction (MBSR) programs** that cultivate a compassionate self-awareness through self-regulation and enhancement of emotional intelligence can **decrease burnout and positively impact mental health** and professionalism.^{4,5}

Methodology

Our **objective** was to evaluate the efficacy of a modified MBSR curriculum in reducing burnout and depression in students.

Using a prospective cohort design, we determined changes in burnout and depression in students before and after the implementation of the curriculum.

Scales used:

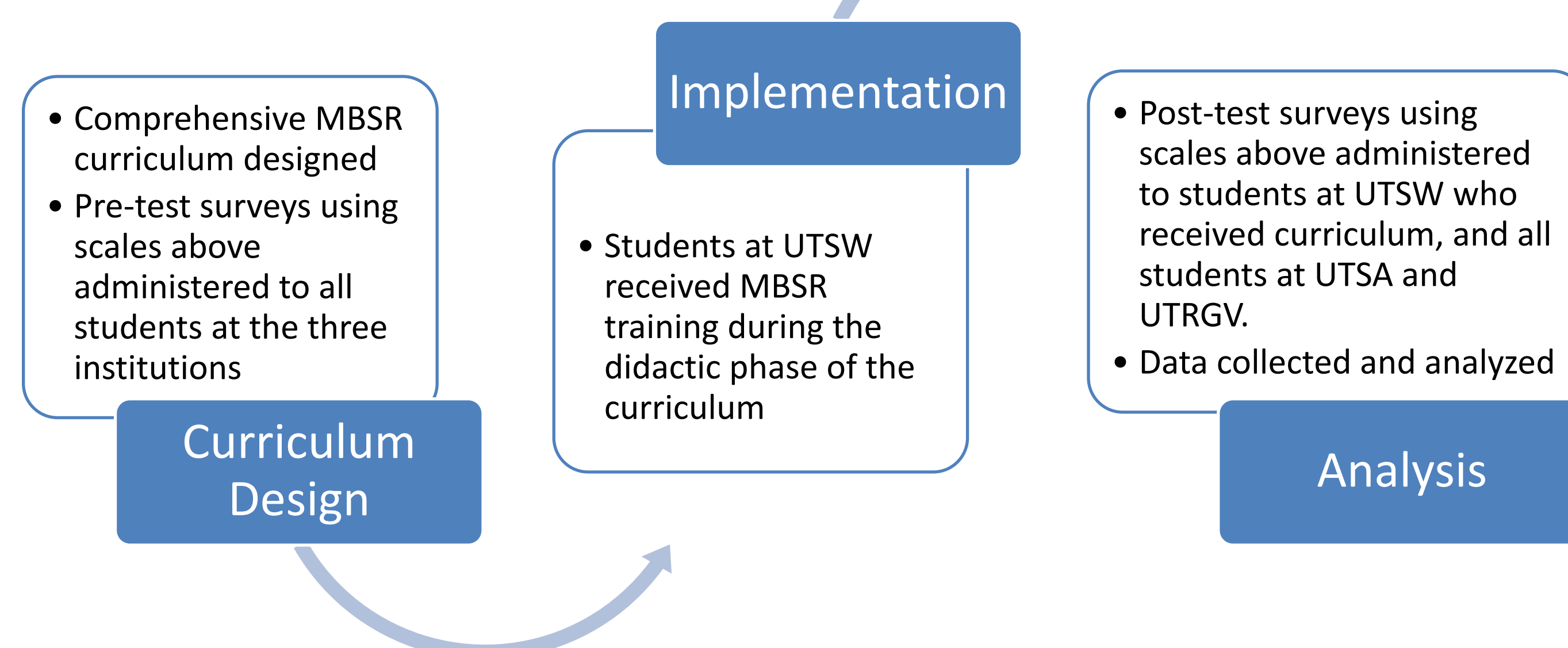
Maslach- Burnout Inventory (MBI).

Harvard Department of Psychiatry/National Depression Screening Day (HANDS)

Tolerance of Ambiguity in Medical Students and Doctors (TAMSAD)

Mindful Attention Awareness scale (MAAS)

Resilience Scale



- We compared scores on the standardized scales pre- and post-curriculum delivery at UT Southwestern (UTSW), as well as compared them to scores from UT San Antonio (UTSA) and UT Rio Grande Valley (UTRGV) who did not have such a curriculum implemented.
- n=61 for pre-survey and n=41 for post-survey
- Statistical analyses run using SAS 9.4 (SAS Institute Inc, Cary, NC)

Results

	UTSW		UTSA/UTRGV	
	Pre	Post	Pre	Post
Age (Mean)	26.0	25.6	29.3	27.5
Gender (%)				
Male	18.92	27.27	25.00	21.05
Female	81.08	72.73	70.83	68.42
Gender Diverse	--	--	4.17	5.26
Prefer to Not disclose	--	--	--	5.26
Race and Ethnicity (%)				
Asian (Far-East, South-East Asia)	16.67	13.64	16.67	21.05
Black or African heritage	8.33	9.09	--	--
Caucasian	33.33	36.36	41.67	52.63
Hispanic/Latinx	22.22	31.82	33.33	10.53
Mixed race (2 or more)	11.11	9.09	4.17	5.26
Prefer not to disclose	8.33	--	4.17	10.53

Table 1: Demographics of students who responded to the pre and post surveys divided by institutional affiliation

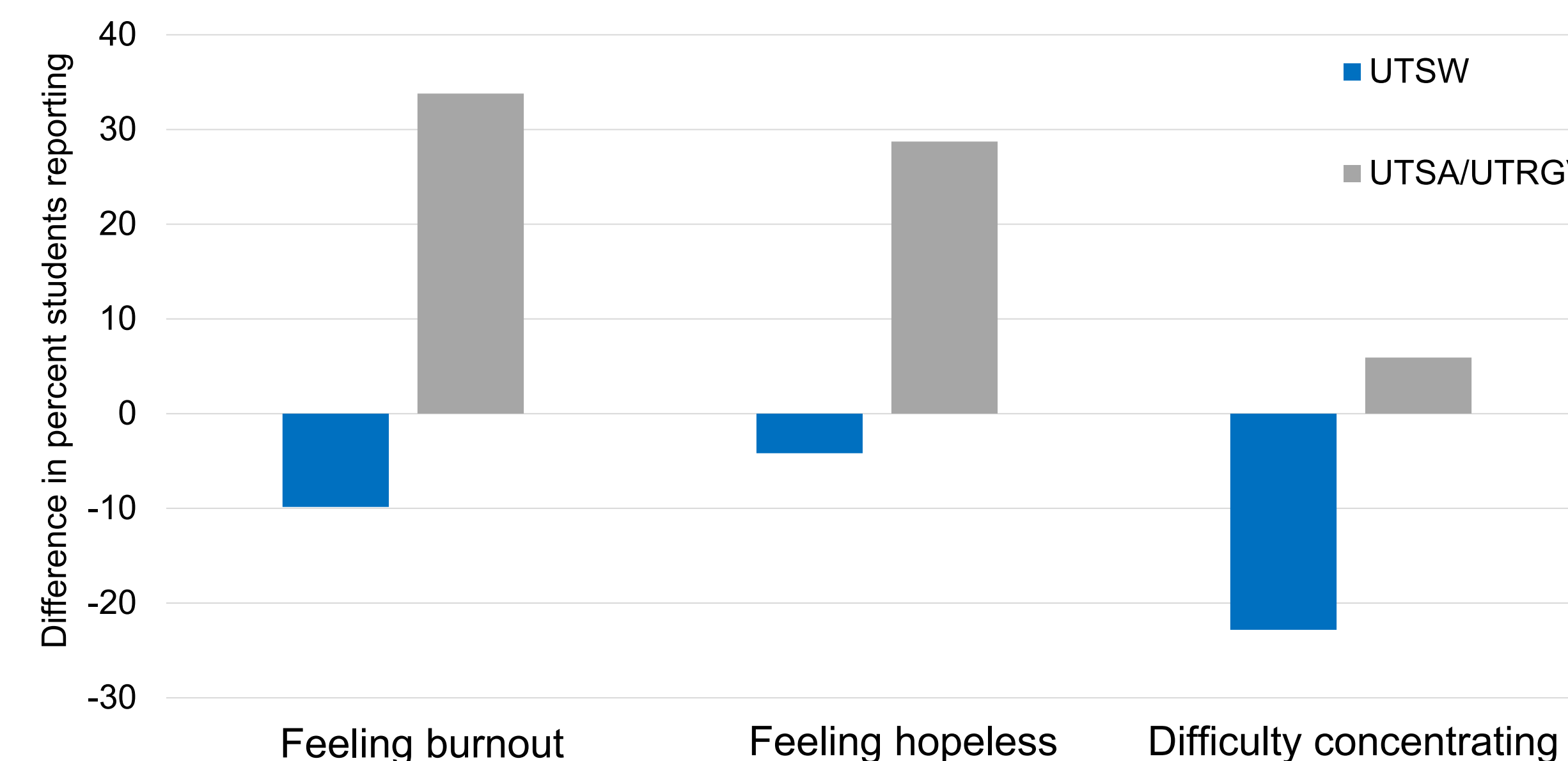


Figure 1: The percent of students reporting **significant burnout** on the MASLACH burnout inventory decreased by 9.9% after the implementation of the curriculum at UTSW and increased by 33.4% at UTSA/UTRGV. The percentage of students reporting **feeling hopeless** (Q5 on the HANDS inventory) decreased by 4.2% at UTSW after curriculum and increased by 28.7% at UTSA/UTRGV in the same time frame. The percent of students reporting **difficulty concentrating** (Q10 on the HANDS inventory) decreased by 22.8% at UTSW after curriculum and increased by 5.9% at UTSA/UTRGV in the same time frame. Changes were not statistically significant, likely due to small sample size.

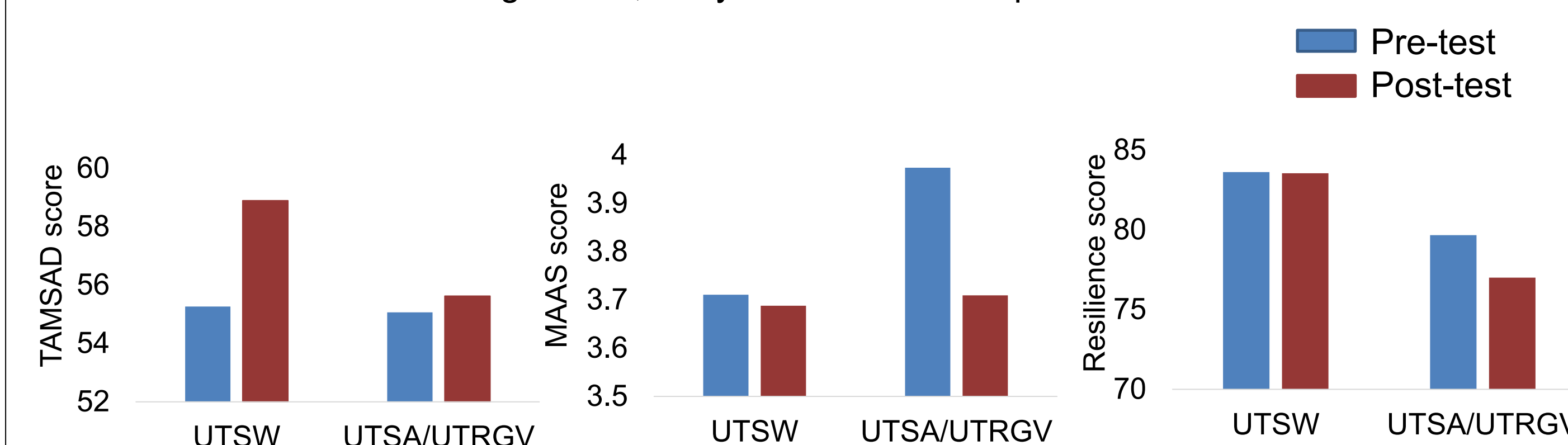
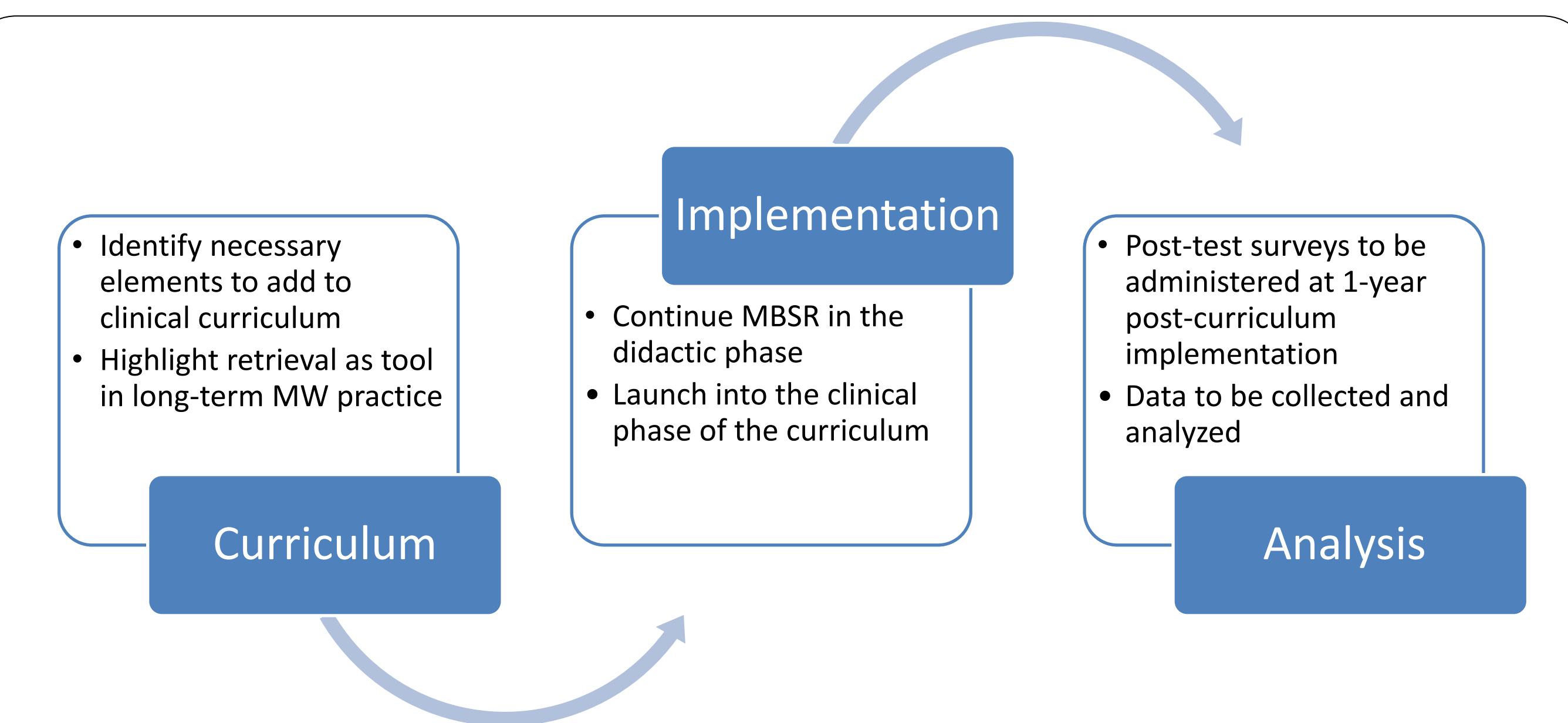


Figure 2: The scores on the **TAMSAD scale (left)** showed a marked improvement at UTSW after the curriculum was implemented. The scores on the **MAAS scale (middle)** and **Resilience scale (right)** stayed approximately the same at UTSW after the curriculum implementation, while they reduced at UTSA/UTRGV. The reduction could probably be attributed to the rigors of the curriculum. The MBSR curriculum likely prevented such a reduction at UTSW. Changes were not statistically significant, likely due to small sample size.

Discussion & Conclusions

- High burnout in the pre-test found at all three institutions, perhaps due to curriculum rigor compounded by a pandemic.
- The benefits of the curriculum evidenced by the **decrease in the number of students experiencing burnout, feeling hopeless, and having difficulty concentrating** compared to those who did not receive the curriculum.
- Tolerance of ambiguity** (degree to which an individual is comfortable with uncertainty, unpredictability, and multiple demands) also **increased** in students receiving curriculum.
- Limitations include small sample size and pre- and post-data analyzed as unpaired data.

Future Directions



References and Acknowledgements

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