MEASURING HIGH SCHOOL COUNSELOR BELIEFS ON THE IMPORTANCE OF MTMDSS UNIVERSAL SUPPORTS SINCE COVID-19

Ryan Carter, Ed.D.
Brent Duckor, Ph.D.

BEAR Seminar | September 26, 2023

BEAR Seminar

AGENDA

- Introductions
- Focus and Context of Study
- USIS Instrument Development
- Scaling and validation evidence
- Findings
- Limitations, Implications & Future Study
- Q&A

BEAR Seminar

BACKGROUND OF THE RESEARCHERS

- School counseling leader with interests in student services
- Pandemic experience & perspective
- MTSS emergence during COVID-19

Ryan Carter, Ed.D.

BEAR Seminar

BACKGROUND OF THE RESEARCHERS

- Director, Center for Innovation in Applied Education Policy
- Ed.D. Core Faculty and Doctoral advisor
- Professor, Lurie College of Education

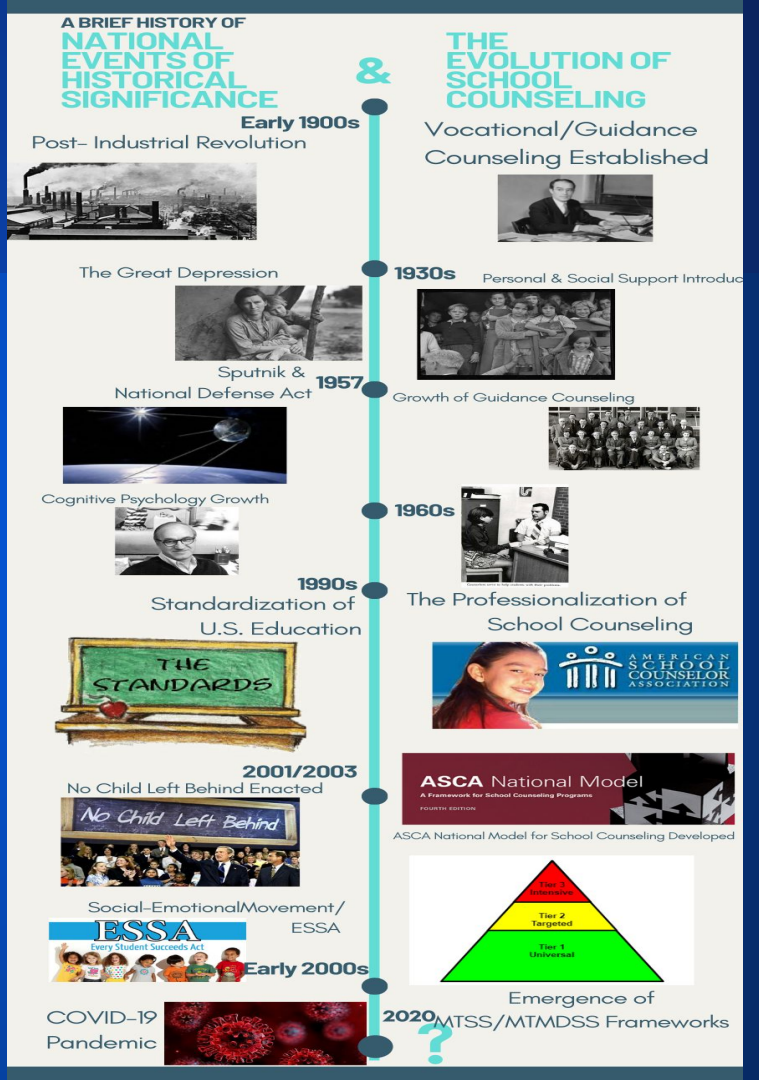
Brent Duckor, Ph.D.

BACKGROUND/
CONTEXT FOR THE STUDY

- Study situated in COVID-19 pandemic AND. . .

CONTEXT FOR THE STUDY

- School Counseling Supports Over Time: Evolve with events of educational significance and beliefs
  (Lambie & Williamson, 2004; Lauterbaugh et al., 2018)

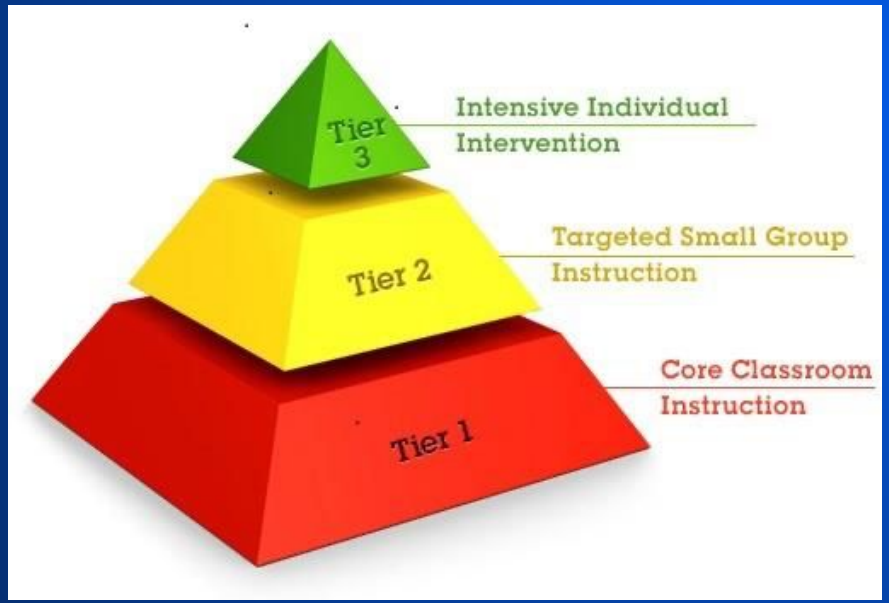


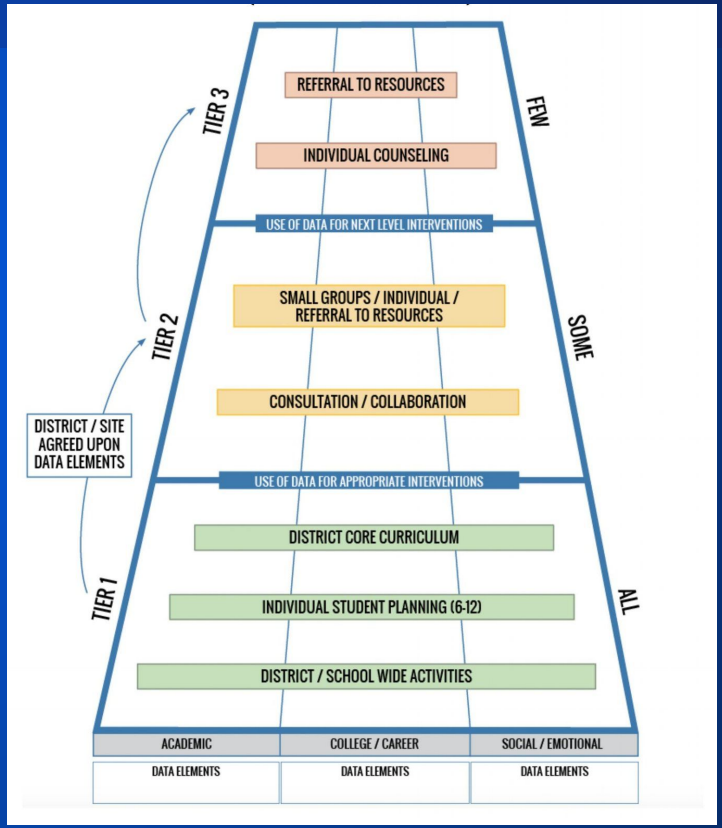
CONTEXT FOR THE STUDY

MTSS/MTMDSS frameworks emergence

(Braun et al., 2018; Sailor et al., 2021)

- MTSS/MTMDSS Overview





CONTEXT FOR THE STUDY

- MTSS gains ground nationally & in California pre-pandemic (Braun et al., 2018; Sailor et al., 2021)
  - National Legislation: ESSA (2015)
  - CA Scaling-UP SUMS (CDE 2015-present)
    - CA state legislation:
      - AB 104, SB 828, SB 840, AB 2508
      - $95,000,000 to-date
  - CA MTSS aligned with LCFF, LCAP, & State Priorities
- MTMDSS introduced in 2017 (Hatch et al., 2019)
- **Enter COVID-19**

CHALLENGES TO ADDRESS

- COVID-19 Pandemic:
  - Unprecedented disruption to education (Savitz-Romer et al., 2021)
  - Spotlight on pre-existing inequities + Focus on equity (Sullivan et. al, 2020)
  - Impact on student needs: evolving, not yet fully known
    - Academic, Social/Emotional/Mental Health, Basic Needs
    - Disparate impacts

- Counselors/schools face dilemma of how to respond
  - Turn to recommendations from CDE, ASCA, CASC
  - Return to pre-pandemic responses emerging: MTSS/MTMDSS

- **Lack of research on MTSS/MTMDSS-based counselor beliefs now, since COVID-19**

PURPOSE & SIGNIFICANCE

Explore and measure California high school counselor beliefs on the importance of MTMDSS (Tier 1) Universal Supports since COVID-19

- Why study school counselors?
- Why study beliefs?
- Why now, since COVID?
- Why MTSS/MTMDSS frameworks?

RESEARCH QUESTIONS

RQ1: What are California high school counselors' beliefs about the importance of Multi-Tiered, Multi-Domain System of Supports (MTMDSS) (Tier 1) Universal Supports since the onset of the COVID-19 pandemic?

RQ2: Can these Universal Supports-based beliefs be measured reliably and is there validity evidence to trust the meaningfulness of the scores generated by the Universal Supports Importance Scale (USIS) instrument?

RQ3: Which variables, if any, predict/explain these Universal Supports-based beliefs?

REVIEW OF THE LITERATURE

Exploration of 5 main topic areas:

1. National Events of Educational Significance, Beliefs, and School Counseling Supports (ASCA National Model, MTSS, MTMDSS)

2. The Impact of COVID-19 on Student Support Needs

3. MTSS/MTMDSS as a Recommended School Counseling Response to COVID-19

4. School Counselor Beliefs and Behavior (Epstein, 1973; Fishbein & Ajzen, 1975; Ajzen & Fishbein, 1980; Sink & Yillik-Downer, 2001)

5. School Counselor Beliefs on MTSS/MTMDSS

METHODOLOGY &

RESEARCH DESIGN

METHODS & RESEARCH DESIGN

- Mixed Methods:
  - Explanatory Sequential Mixed Methods Approach
  - Two phases
    - QUAN→Qual

SETTING/CONTEXT

- Year 3 of a multi-year, global health pandemic
- Remote for both phases of data collection
- High schools/districts throughout California

STUDY SAMPLE RECRUITMENT

- Participant Selection
  - High school counselors practicing in California
- Recruitment Sources
  - CASC membership directory
  - Publicly available school counseling directories
- Recruitment Emails
  - Outreach to 903 school counselors
  - Multiple recruitment phases
    - Based on survey response rate
  - Recruitment Flyer
- Purposive Sampling for Interviews
  - Demographic indicators (personal & school)
  - Survey response data

INSTRUMENTATION

Two instruments developed and utilized

1. QUANTITATIVE METHODS:
    - Fixed-choice Likert style survey: Universal Supports Importance Scale (USIS)
        - Validation of Universal Supports Importance Scale (USIS) for High School Counselors

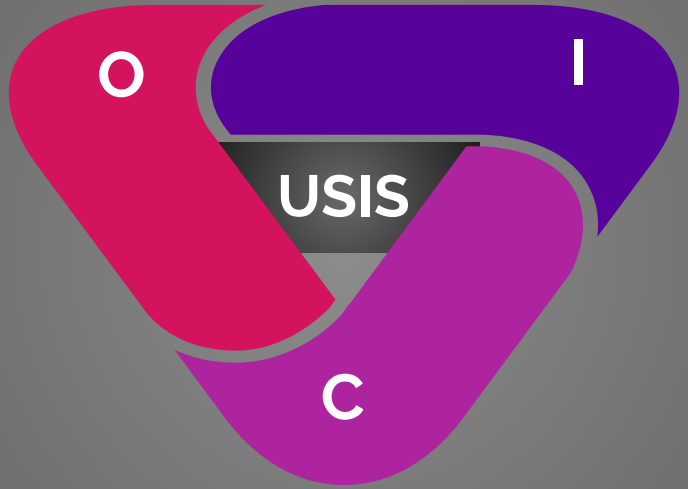
INSTRUMENTATION

2. QUALITATIVE METHODS:
    - Semi-Structured Interview Protocol
        - Case profile triangulation (explanatory sequential mixed methods)

USIS

LOGIC OF THE INSTRUMENT

Observation:
Survey Items



Interpretation:
Fixed-Choice Item Response Scales

Construct:
School Counselor Beliefs

Adapted from National Research Council, 2001

USIS: CONSTRUCT

CONSTRUCT MAP: SCHOOL COUNSELOR BELIEFS

Construct Map:
High School Counselor Beliefs on the Importance of MTMDSS
(Tier 1) Universal Supports* since COVID-19

***Universal Supports** = (1) Core Curriculum, (2) Individual Learning Plans, (3) Schoolwide Events, (4) Parent Education Events (4 facets)*

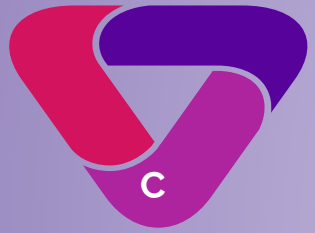
HIGH

Respondents	Responses to items that represent counselor beliefs
School counselors who strongly believe all manner and type of "Universal Supports" are essential. These counselors have a strong belief in the need for all facets of practice. These include practices drawn from: *(1) Core Curriculum, (2) Individual Learning Plans, (3) Schoolwide events, (4) Parent Education Events*. These counselors may also strongly believe that these practices are efficacious and needed particularly *during/since the COVID-19 pandemic*. They prioritize all 4 facets of practices and see them equally important/or as a priority for their school sites.	1. Academic study skills curriculum, delivered to all students, is essential since COVID. 2. College admissions/A-G requirements curriculum, delivered to all students, is essential since COVID. 3. Managing stress and anxiety curriculum, delivered to all students, is essential since COVID. 4. Academic support resources curriculum, delivered to all students, is essential since COVID. 5. 21st Century Skill-building curriculum, delivered to all students, is essential since COVID. 6. College and career research curriculum, delivered to all students is

Accessibility: Investigate

USIS: CONSTRUCT

CONSTRUCT: Narrowing Focus



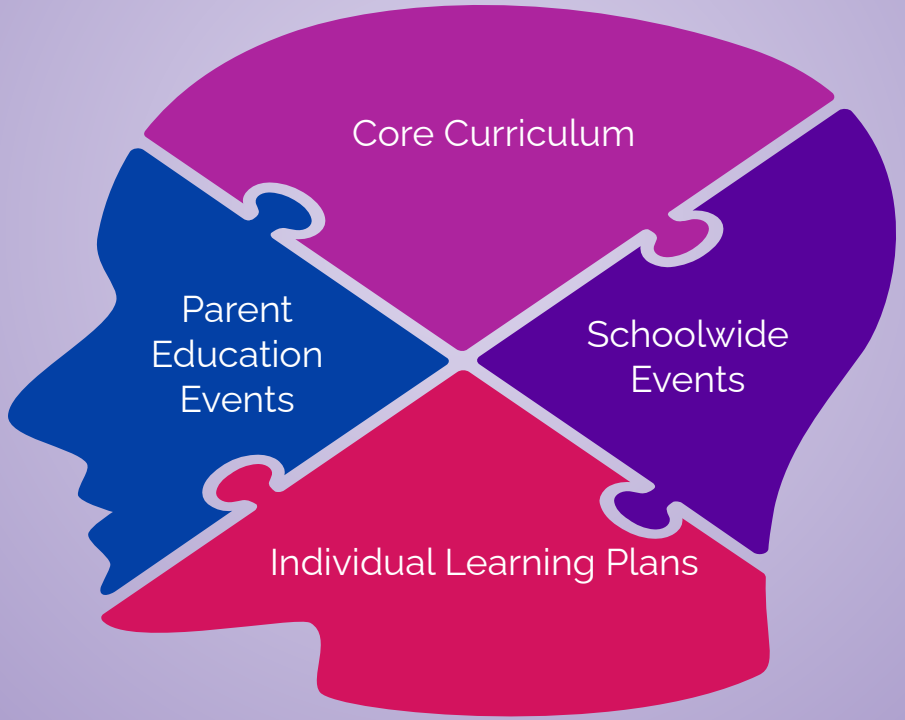
Rationale for:

- MTMDSS focus
- (Tier 1) Universal Supports focus

USIS: CONSTRUCT

School Counselor Beliefs on Importance of Universal Supports:

4 Facets of Practice



USIS: OBSERVATION

STRATEGIES & TOOLS

- Survey Modality: Online–Qualtrics/Emailed
- 3 Sections
  - S1: 21 items; S2: 18 items; S3: 6 items
- Fixed Choice Responses

Sample Item:
Individualized, 4-year academic planning for all students is essential since COVID-19.

USIS: INTERPRETATION

INTERPRETATION STRATEGIES & TOOLS

#	ITEM	1 Strongly Agree	2 Agree	3 Neutral	4 Disagree	5 Strongly Disagree
Q1	A districtwide high school counseling curriculum focused on building academic skills delivered to all students is essential since COVID-19.	❑	❑	❑	❑	❑
Q9	Individualized postsecondary planning for all students is essential since COVID-19	❑	❑	❑	❑	❑
Q16	District/schoolwide cultural diversity education events are essential since COVID-19.	❑	❑	❑	❑	❑
Q21	District/schoolwide parent education events focused on mental health support resources are essential since COVID-19	❑	❑	❑	❑	❑

QUALITATIVE INSTRUMENTATION

Semi-Structured Interview Protocol

- Designed to align with construct maps and survey items
- One open-ended question for each facet of practice
  - Series of follow-up probes to elicit further insight
- Designed to triangulate survey responses as well as deepen understanding of construct (school counselor beliefs)
- Design iterative process
- Refinement based on expert review and feedback, survey responses

Qualitative INSTRUMENTATION

SEMI-STRUCTURED INTERVIEW SAMPLE PROMPTS

Individual Learning Plans

Q: Can you describe how important you think individualized planning or 4-year planning delivered to all students is in high school counseling programs since COVID-19?

Parent Education Events

Q: Can you describe your views on how important you think parent education events are in school counseling programs since COVID-19?

Probes

Can you explain? Can you say more? Can you give some examples?

DATA ANALYSIS

Research Question	Analysis	Model/Method	Software	Data Source
RQ1-Beliefs Importance Universal Supports	QUAN Frequency of responses QUAL	Descriptive Statistics Content/Thematic Analysis (Inductive & Deductive)	MS Excel SPSS28 Excel/Dedoose	USIS Survey Data Interview Transcripts
RQ2-Reliability & validity of USIS measurement of Universal Supports Beliefs	QUAN	Wright Maps Model Fit IRT Analysis DIF Analysis	MS Excel SPSS28 ConQuest	USIS Survey Data
RQ3-Variables predict HS counselor beliefs	QUAN Relationships between beliefs and demographics	Descriptive Statistics Regression Analysis	MS Excel SPSS28	USIS Survey Data

VALIDITY & RELIABILITY

Validity Evidence by Type	Reliability Evidence by Type
Content Validity • Construct maps • Expert panel review	**Internal Consistency** • Cronbach's Alpha • Person Separation
Response Process Validity • Panel think aloud • Exit Interview	
Internal Structure Validity • Wright Maps • Partial Credit Model • IRT Analysis • DIF Analysis	

(AERA, APA. & NCME, 2014)

STUDY

FINDINGS

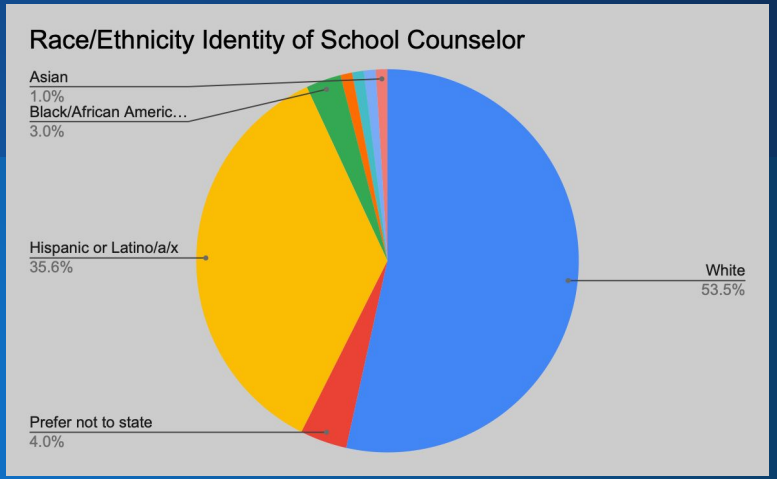
FINDINGS

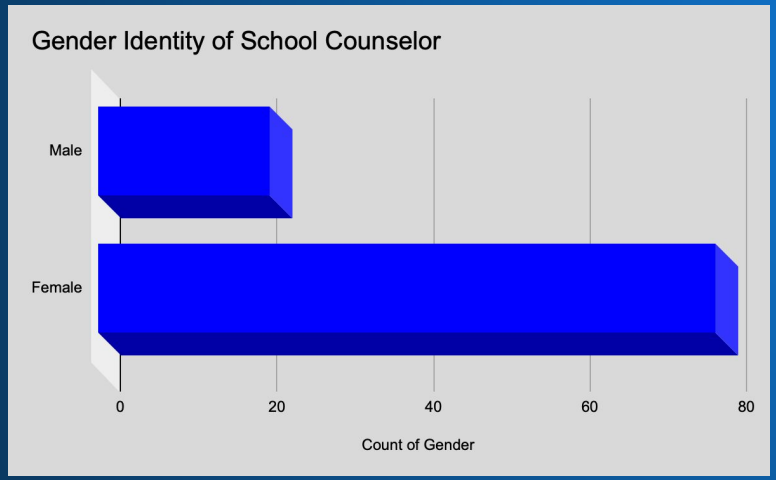
- Profile of the Participants (Survey & Interviews)
- Results for RQ1
- Results for RQ2
- Results for RQ3

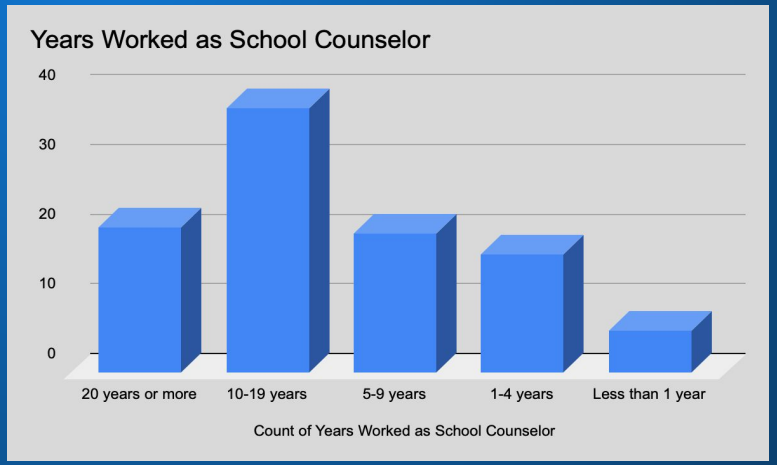
Profile of the Survey Participants

School Counselor Demographics

- n = 113 school counselors
- 100% currently employed in CA as high school counselor



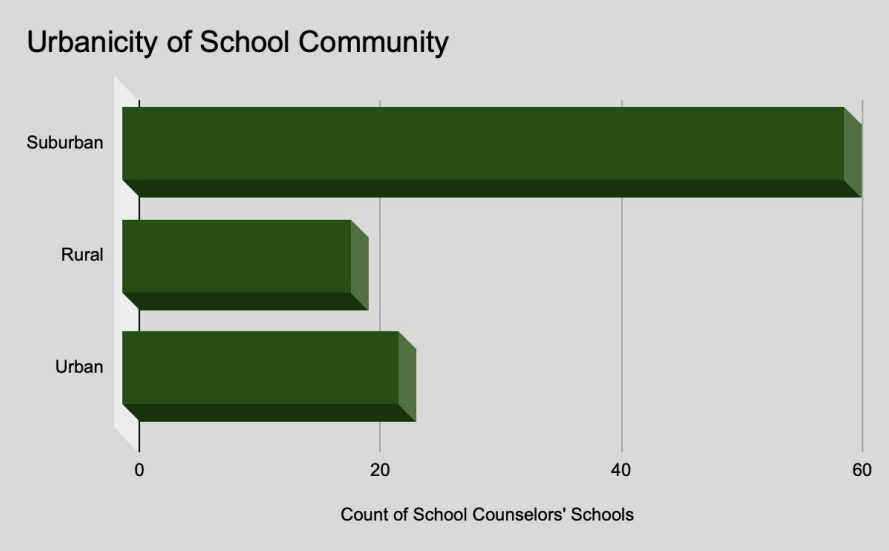




Profile of the Survey Participants

School Demographics

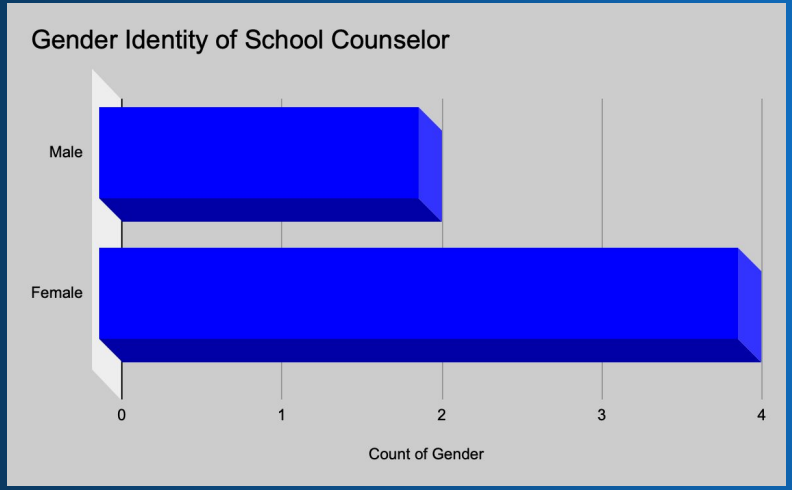
- 98% Public High Schools
- 89% Comprehensive High Schools
- 85% > 1,000 students enrolled

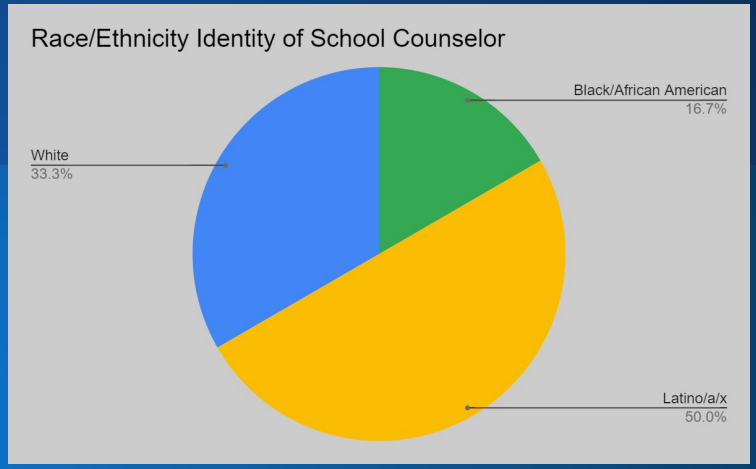


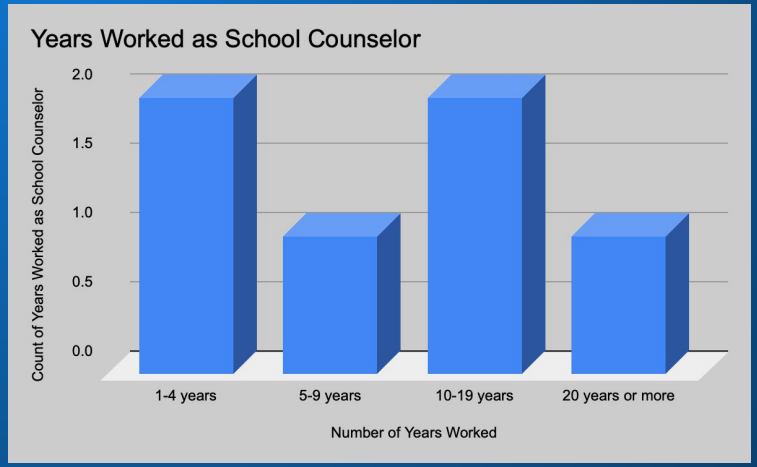
Profile of the Interview Participants

School Counselor Demographics

- n=6

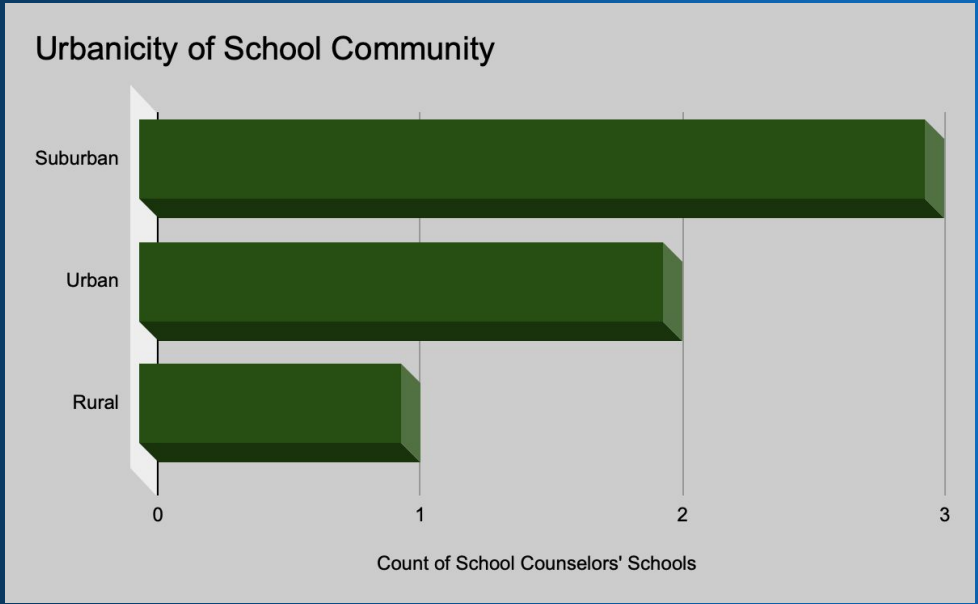


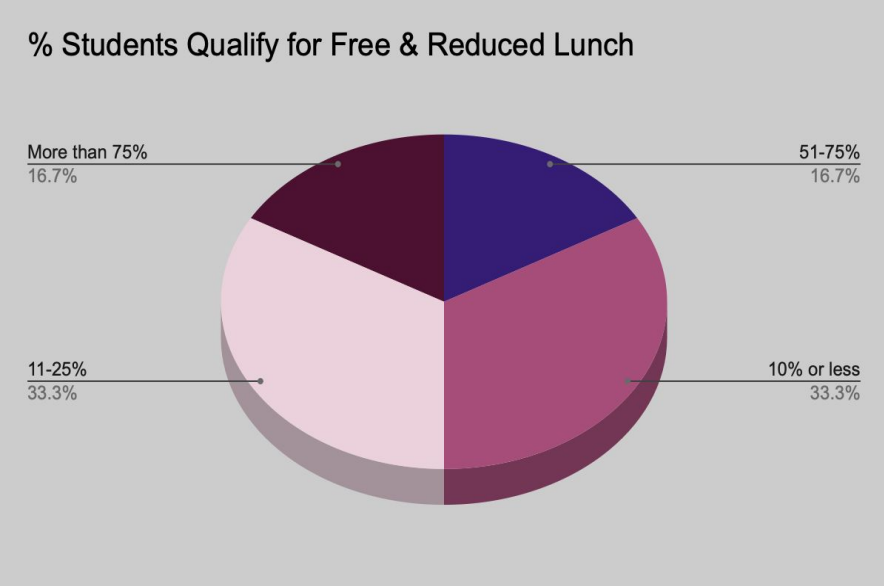




Profile of the Interview Participants

School Demographics





RESULTS: RQ1

RQ1: What are California high school counselors' beliefs about the importance of MTMDSS (Tier 1) Universal Supports since the onset of the COVID-19 pandemic?

- Analysis of the USIS Survey Instrument (Quantitative Data)
- Analysis of the Semi-Structured Interview Protocol Instrument (Qualitative Data)
- Analysis of the Quantitative and Qualitative Findings

Findings from USIS Survey instrument

- USIS Part 1: Q1 - Q21
- 4 Facets of Practice
- High levels of agreement on the importance of all 4 facets of practice (75% or more agreed or strongly agreed with each item)
- Low levels of disagreement & neutrality
  (no item had more than 5% disagreement)
- No strong disagreement for any item

Item Analysis for USIS Survey instrument

Facet of Practice 1: School Counseling Curriculum

Item	Strongly Disagree (0)	Disagree (1)	Neutral (2)	Agree (3)	Strongly Agree (4)	Missing Values	Median
Q1	0	5	8	31	69	0	4.0
	0%	4.4%	7.1%	27.4%	61.1%	0%	
Q2	0	0	8	30	75	0	4.0
	0%	0%	7.1%	26.6%	66.4%	0%	
Q3	0	0	5	25	83	0	4.0
	0%	0%	4.4%	22.1%	73.5%	0%	
Q4	0	3	9	48	53	0	3.0
	0%	2.7%	8.0%	42.5%	46.9%	0%	
Q5	0	3	11	26	73	0	4.0
	0%	2.7%	9.7%	23.0%	64.6%	0%	
Q6	0	1	4	21	87	0	4.0
	0%	.9%	3.5%	18.6%	77.0%	0%	

Facet of Practice 2: Individualized Planning

Item	Strongly Disagree (0)	Disagree (1)	Neutral (2)	Agree (3)	Strongly Agree (4)	Missing Values	Median
Q7	0	6	9	33	64	1	4.0
	0%	5.3%	8.0%	29.2%	56.6%	.9%	
Q8	0	4	12	36	60	1	4.0
	0%	3.5%	10.6%	31.9%	53.1%	.9%	
Q9	0	0	8	48	54	3	3.0
	0%	0%	7.1%	42.5%	47.8%	2.7%	
Q10	0	6	12	46	46	3	3.0
	0%	5.3%	10.6%	40.7%	40.7%	2.7%	
Q11	0	1	15	45	48	4	3.0
	0%	.9%	13.3%	39.8%	42.5%	3.5%	

Facet of Practice 3: Schoolwide Events

Item	Strongly Disagree (0)	Disagree (1)	Neutral (2)	Agree (3)	Strongly Agree (4)	Missing Values	Median
Q12	0	0	9	44	54	6	4.0
	0%	0%	8.0%	38.9%	47.8%	5.3%	
Q13	0	1	8	49	49	6	3.0
	0%	.9%	7.1%	43.4%	43.4%	5.3%	
Q14	0	4	15	48	40	6	3.0
	0%	3.5%	13.3%	42.5%	35.4%	5.3%	
Q15	0	0	3	35	68	7	4.0
	0%	0%	2.7%	31.0%	60.2%	6.2%	
Q16	0	4	5	37	58	9	4.0
	0%	3.5%	4.4%	32.7%	51.3%	8.0%	

Facet of Practice 4: Parent Education Events

Item	Strongly Disagree (0)	Disagree (1)	Neutral (2)	Agree (3)	Strongly Agree (4)	Missing Values	Median
Q17	0	2	5	41	56	9	4.0
	0%	1.8%	4.4%	36.3%	49.6%	8.0%	
Q18	0	3	8	44	48	10	3.0
	0%	2.7%	7.1%	38.9%	42.5%	8.8%	
Q19	0	4	11	45	42	11	3.0
	0%	3.5%	9.7%	39.8%	37.2%	9.7%	
Q20	0	1	9	37	55	11	4.0
	0%	.9%	8.0%	32.7%	48.7%	9.7%	
Q21	0	0	5	37	60	11	4.0
	0%	0%	4.4%	32.7%	53.1%	9.7%	

Findings from USIS Semi-Structured Interview Protocol instrument

- Interviews covered 4 facets; 1 primary question per facet, followed by a series of probes
- High levels of agreement across all four facets
- Low levels of neutrality and disagreement
- No strong disagreement in any facet
- Each interviewee's responses relatively aligned with their responses on USIS = triangulated responses
- Probes revealed:
    - Layers within their beliefs of importance (some additional neutrality/skepticism/conflicting beliefs
    - Emergent themes beyond RQ's of this study (covered in Discussion)

Quote Analysis: Qualitative Findings

"True believers": "All students deserve access to grade-specific information and the best and most comprehensive way to get it is through classroom curriculum. Otherwise you risk missing some students, some groups." [Interviewees 6, 3, 2]

"Fence sitters": "I would say it's important. I mean it's not going to be - it can't be at the very top of the priority list, because you just don't really have time to put all your resources into that, you know, because of the emergency room type setting here." [Interviewee 1]

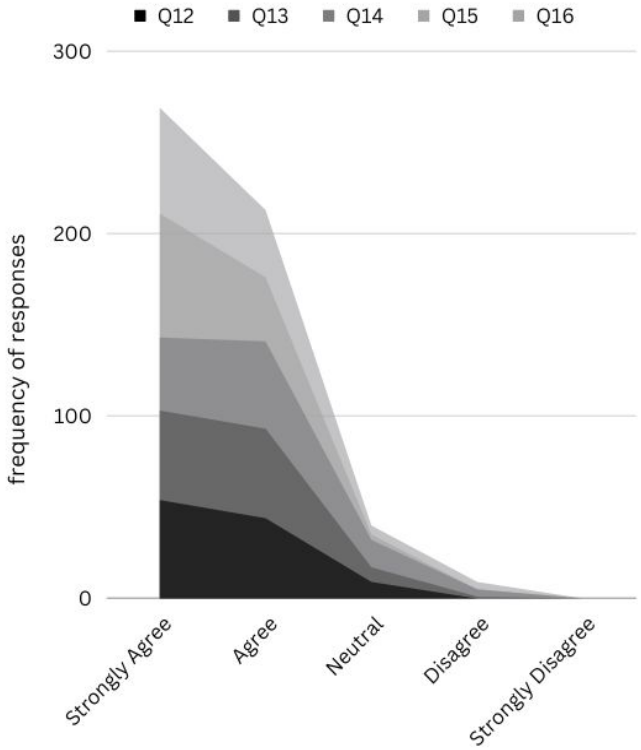
"Skeptics": "I don't know if it's been long enough to really be able to think about all those things. . .we're still in this stage of like trying to get back to something normal. It's definitely important, but I don't know how that's really been the priority." [Interviewee 5]

Facet Map–
High School Counselor Range of Beliefs in Importance of Facet 1: **School Counseling Curriculum**

Essential/ True Believers	*"I think what makes it really important is making sure that ALL students are getting the information. All students deserve access to grade-specific information, and the best and most comprehensive way to get it is to provide it through classroom curriculum. Otherwise you risk missing some students, some groups. That's an important part of the MTSS Tier 1 process, the lessons that you provide." [Interviewee #6]* *"I think it's super important, and it's super important that we try to reach, you know, have a high school curriculum that reaches all grade levels, all students, regardless of what kind of programming they're in. And I say that because, you know, we have obviously different types of programs at the high schools, whether it's for newcomers or for students who are doing academies or things like that. Right, so we have to be able to reach all students. So I think it's important that we plan ahead so that we're able to deliver things to everyone." [Interviewee #3]* *"Since COVID, I think it's really really important, obviously, to have that curriculum laid out. I mean, probably that biggest piece is just the mental health support. I think it was there before COVID, but I think it is- you know wellness centers weren't really a thing when I first got into counseling, and since COVID, I don't know of a school that doesn't have a wellness center. So I think now it's a really important piece of the school counseling curriculum. I think out of anything, the biggest need for curriculum has been mental health." [Interviewee #5]* *"I think it is an important factor. It's something that we do at each grade level. The engagement during distance learning was a little bit hit or miss. So there's basically a 12 month gap, I guess, March, let's call it March 2020 through March 2021, and really through the end of the spring 2021 semester, where, you know, we were just not getting to know our students, in a deeper, more meaningful way. So we lost a lot of time and lost a lot of ground. So I think the comprehensive curriculum—that's one step towards making up for some of that, and getting to know kids a little bit better–and for them getting to know us, and kind of how we work with them and how we serve them." [Interviewee #2]*
On the fence	*"I would say it's important. I mean it's not going to be– it can't be at the very top of the priority list, because you just really don't have time to put all your resources into that, you know, because of the emergency room type setting here." [Interviewee #1]*
Skeptic	*"I don't know if it's been long enough for us to really be able to think about all those things. I think we're still in this stage of like trying to get back to something normal. I think last year, being our first year back on campus, it was just kind of like a "what are we doing?" type of thing. So it's definitely important but like, probably like a 5 out of 10 right now. It's definitely important, but I don't know how that's really been the priority. I think in some districts the priority is just getting back to something normal before worrying about–really focusing on that curriculum." " [Interviewee #5?]*

Combined Quantitative & Qualitative Findings for Selected Items

- High level of agreement in importance
- Relative alignment between survey and interview responses
- Similar distribution of responses
- Similar range of responses



"It's really important for a lot of reasons, especially since the pandemic. There are still a lot of people that are just generally feeling disconnected."

"I think there is a big need for these. I think a lot of my students feel disconnected from school still, and I think they're very important for our students to get reconnected."

"I think it's important. . .but . . .you know, when it's a school-wide event, you don't always have 100% participation . . . we know that the amount of kids who are going to show up is higher in the classroom."

"I guess I'm a believer in probably, you know, the smaller the better. So I think the more you can do individually, the better. The more you can do small groups as opposed to classroom groups the better. The more you can do classrooms as opposed to whole grade, the better. So, I don't know how much effectiveness we have, you know, when we pull 475 kids into the theater, walk through a slideshow, or something like that. You know a good number are just going to be on their phones . . . So, I would just say smaller is better."

SUMMARY OF FINDINGS FOR RQ1

- Diverse and relatively representative survey sample (n=113) & interview sample (n=6)
- High levels of agreement (75% or higher) in all items across 4 facets (both methods)
- Limited range of beliefs captured in both methods
- Alignment between survey and interview responses
- Emergent themes identified from interviews

RESULTS: RQ2

RQ2: Can these Universal Supports-based beliefs be measured reliably and is there validity evidence to trust the meaningfulness of the scores generated by the Universal Supports Importance Scale (USIS) instrument?

- Explored the validity & reliability of scores generated from the USIS Survey instrument

- The USIS Survey underwent various Testing Standards based protocols to validate the scale for future use

RQ2

VALIDITY EVIDENCE for USIS

Validity Evidence by Type
Content Validity ● Construct maps ● Expert panel review
Response Process Validity ● Panel think aloud ● Exit Interview
Internal Structure Validity ● Wright Maps ● Partial Credit Model Fit ● IRT Analysis ● DIF Analysis

(AERA, APA. & NCME, 2014)

RQ2: Content Validity

CONSTRUCT MAPS

Construct Map:
High School Counselor Beliefs on the Importance of MTMDSS
(Tier 1) Universal Supports* since COVID-19

***Universal Supports** = (1) Core Curriculum, (2) Individual Learning Plans, (3) Schoolwide Events, (4) Parent Education Events (4 facets)*

HIGH

Respondents	Responses to items that represent counselor beliefs
School counselors who strongly believe all manner and type of "Universal Supports" are essential. These counselors have a strong belief in the need for all facets of practice. These include practices drawn from: *(1) Core Curriculum, (2) Individual Learning Plans, (3) Schoolwide events, (4) Parent Education Events*. These counselors may also strongly believe that these practices are efficacious and needed particularly *during/since the COVID-19 pandemic*. They prioritize all 4 facets of practices and see them equally important/or as a priority for their school sites.	1. Academic study skills curriculum, delivered to all students, is essential since COVID. 2. College admissions/A-G requirements curriculum, delivered to all students, is essential since COVID. 3. Managing stress and anxiety curriculum, delivered to all students, is essential since COVID. 4. Academic support resources curriculum, delivered to all students, is essential since COVID. 5. 21st Century Skill-building curriculum, delivered to all students, is essential since COVID. 6. College and career research curriculum, delivered to all students is

Accessibility: Investigate

School counselors who disbelieve all manner and type of "Universal Supports" are essential. These include practices drawn from: *(1) Core Curriculum, (2) Individual Learning Plans, (3) Schoolwide events, (4) Parent Education Events*. These counselors have serious doubts/reservations about all 4 facets, and they tend to question whether these practices are efficacious and/or needed, particularly *during/since the COVID-19 pandemic*.	17. Schoolwide diversity appreciation events are not essential since COVID. 18. Parent education events focused on school wide academic support resources are not essential since COVID. 19. Parent education events focused on postsecondary pathways are not essential since COVID. 20. Parent education events focused on schoolwide and community mental health support resources are not essential since COVID. 21. Parent education events focused on college planning are not essential since COVID. 22. Parent education events focused on school wide mental health initiatives and trends are not essential since COVID.

LOW

RQ2: Content Validity

EXPERT PANEL REVIEW

Experts in the field of:

- School Counseling
- Student Services
- MTSS

Iterative and ongoing feedback in the development of:

- Construct
- Survey items
- Survey design & functionality

RQ2: Response Process Validity

PANEL THINK ALOUD EVIDENCE

Appendix D: Panel Think Aloud Evidence

Panel Think Aloud: USIS, Part 1

Item	Clarity of Item	Interpretations/Comments	Suggestions
Q1	Could be clearer	I'm thinking our curriculum, but could also be canned curriculum you buy?--(#2)....either way its important IMO–(#3)---But not super clear if school curriculum, subject curriculum, counseling curriculum, etc.? "study" skills too limiting in my mind--academic skills is more representative and comprehensive–(#1)	More specificity: "school counseling curriculum"?-(#1), make it read "academic skills", and maybe add "building" like other skills questions–(#3)
Q2	Clear	Interpret it to mean curriculum that we could be doing in classroom guidance, so reaches everyone, right?	
Q3	Clear	The essential since COVID, repetitive but reminds me to consider it, which is good. (#3)	
Q4	Clear	Yeah, repetition of essential is making me consider that every time too	
Q5	Clear	Communication, collaboration, etc. (#3)	
Q6	Could be clearer	"Research" isn't the best--do you mean like researching colleges?--I think research might seem too clinical, what about exploration ?	Replace "research" with "exploration"--(#2); Yeah that's a better way of describing what we would be delivering--less confusing.--(#1)
Q7	Clear		
Q8	Clear		
Q9	Clear	These (Q7-Q11)are all kind of asking same thing--all seems to be about 4 year plan stuff (#2); Yes this is how I am interpreting all individualized planning questions too (#1); yeah, clearly 4-year plan (#3)	

RQ2: Response Process Validity

EXIT INTERVIEW EVIDENCE

Selected Exit Interview Items/Responses

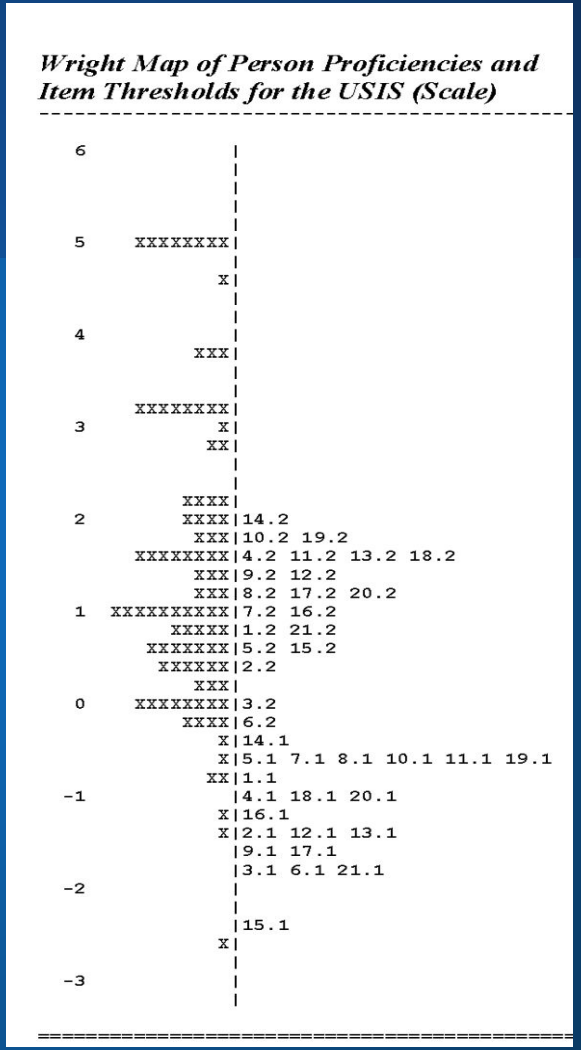
Item	Prompt	Responses n (%)	
		Yes	No
Q40	Were there any questions on this survey that were unclear?	13 (12.9%)	88 (87.1%)
Q41	Did you have enough time to complete all the questions?	101 (100%)	0 (0%)
Q43	Do you have any suggestions for improving the survey?	17 (16.8%)	84 (83.2%)

- Items clear, sufficient time
- Clarity/Suggestions:
    - “since COVID-19”

RQ2: Internal Structure Validity

THE WRIGHT MAP

- Collapsed response categories to 3
- Respondents found most items easy to endorse
- Even most difficult to endorse items = 83% had 50% or higher probability of endorsing at the strongest levels of agreement
- USIS items unable to cover full range of school counselor beliefs
- Suggests need for item improvements



RQ2: Internal Structure Validity

MODEL FIT

- All items' mean square values are within commonly accepted lower (0.75) and upper (1.33) bounds
- All USIS items fit the partial credit model; no misfit items identified

Item Parameter Estimates, Standard Errors, and Mean Square Weighted Fit and t Statistics for the USIS (Scale)

Variables				Weighted Fit	
Items	Estimate	Error	Infit Mean Square	Confidence Interval	Infit t
Q1	0.012	0.180	1.05	(0.73, 1.27)	0.4
Q2	-0.396	0.213	1.15	(0.71, 1.29)	1.0
Q3	-0.823	0.258	0.94	(0.68, 1.32)	-0.4
Q4	0.251	0.188	1.14	(0.75, 1.25)	1.0
Q5	-0.007	0.176	1.12	(0.73, 1.27)	0.8
Q6	-0.891	0.260	1.06	(0.65, 1.35)	0.4
Q7	0.185	0.174	1.22	(0.74, 1.26)	1.6
Q8	0.300	0.172	1.09	(0.75, 1.25)	0.7
Q9	-0.047	0.216	0.96	(0.74, 1.26)	-0.3
Q10	0.647	0.173	0.89	(0.75, 1.25)	-0.9
Q11	0.523	0.177	1.08	(0.75, 1.25)	0.6
Q12	0.013	0.208	1.05	(0.74, 1.26)	0.4
Q13	0.119	0.209	0.88	(0.74, 1.26)	-0.9
Q14	0.820	0.175	0.99	(0.75, 1.25)	-0.0
Q15	-0.906	0.323	0.98	(0.73, 1.27)	-0.1
Q16	-0.070	0.207	0.96	(0.73, 1.27)	-0.2
Q17	-0.186	0.226	0.95	(0.73, 1.27)	-0.3
Q18	0.292	0.197	0.86	(0.74, 1.26)	-1.1
Q19	0.611	0.183	0.88	(0.74, 1.26)	-0.9
Q20	0.043	0.201	1.03	(0.73, 1.27)	0.3
Q21	-0.489*	0.259	0.97	(0.72, 1.28)	-0.1

Note: An asterisk next to a parameter estimate indicates that it is constrained.

RQ2: Internal Structure Validity

IRT ANALYSIS

- Outcome space/response data collapsed into 3 categories for IRT Analysis
- 20/21 items consistent with the USIS instrument

Item Statistics for Q8 (Individualized Planning on Course Selection is Essential)

Statistics	Response Categories		
	0	1	2
Count	16	36	60
Percent	14.29	32.14	53.57
Pt-Biserial	-0.38	-0.27	0.52
Mean Location	0.22	0.83	2.26
Std. Dev. Of Location	1.13	0.85	1.38

Item Statistics for Q6 (Curriculum on Mental Health and Well-being is Essential)

Statistics	Response Categories		
	0	1	2
Count	5	21	87
Percent	4.42	18.58	76.99
Pt-Biserial	-0.13	-0.49	0.52
Mean Location	0.72	0.22	1.85
Std. Dev. Of Location	1.04	0.90	1.39

RQ2: Internal Structure Validity

DIF ANALYSIS

- DIF Analysis = Differential item functioning
- Gender & Ethnicity DIF analyses using IRT model
    - DIF negligible (using Paek 2002 criteria)

DIF ANALYSES: Gender & Ethnicity

Estimated Mean Proficiencies of the Male and Female Respondents

Variables

Gender	Estimate	Error
Male (0)	-0.095	0.116
Female (1)	0.095*	0.116

An asterisk next to a parameter estimate indicates that it is constrained
Chi-square test of parameter equality = 0.66, df = 1

Estimated Mean Proficiencies of the White and Underrepresented Respondent Groups

Variables

Ethnicity	Estimate	Error
White (0)	0.006	0.088
Underrepresented Groups (1)	-0.006*	0.088

Note. An asterisk next to a parameter estimate indicates that it is constrained.

Chi-square test of parameter equality = 0.01, df = 1.

RQ2

RELIABILITY EVIDENCE

Internal Consistency Reliability Coefficients

Scale	Coefficient Values I	
	Cronbach's alpha	Person Separation
USIS	0.84	0.847

- Collected 1 type of evidence: Internal Consistency
- Cronbach's alpha and person separation reliability coefficients are acceptable for informal diagnostic and formative uses

SUMMARY OF FINDING FOR RQ2

RQ2: Can these Universal Supports-based beliefs be measured reliably and is there validity evidence to trust the meaningfulness of the scores generated by the Universal Supports Importance Scale (USIS) instrument?

- Construct/maps and survey items grounded in the literature & reviewed by experts in the field
- Respondents found survey items clear and understandable
- USIS items covered a limited range of counselor beliefs
- All items fit with USIS instrument
- All but 1 item (Q6) well-functioning, stable and consistent
- No DIF (gender or ethnicity)
- Acceptable reliability levels across 2 coefficients
- Overall evidence supports USIS scale's limited use in future research

Findings

RESULTS: RQ3

RQ3: Which variables, if any, predict/explain these Universal Supports-based beliefs?

- 3 separate linear regression models generated using SPSS to address RQ3

RQ3

REGRESSION MODEL #1

Regression Model Summary for Simple Linear Regression (Regression Model #1)

Model	Explanatory Variable	R	R Square	Adjusted R Square	Standard Error of the Estimate
1	Urbanicity of school community	1.83	.033	.024	1.579
2	Percentage of students qualify free/reduced lunch	.061	.004	-.006	1.603
3	Years worked as a school counselor	.007	.000	-.010	1.606
4	CASC membership	.006	.000	-.010	1.606
5	Gender identity of school counselor	.109	.012	.002	1.596
6	Ethnicity/race identity of school counselor	.041	.002	-.009	1.605
7	Age of school counselor	0.14	.000	-.010	1.606

RQ3

REGRESSION MODEL #2

Effect of Explanatory Variables on USIS Scale Scores for Regression Model #2

Variable	Unstandardized Regression Coefficient (B)	Standard Error (B)	Standardized Regression Coefficient Beta	t	Sig.
(Constant USIS Scale Score)	.950	.530		1.793	.076
Urbanicity of school community	.717	.413	.188	1.737	.086
Percentage of students qualify free/reduced lunch	-.049	.362	-.015	-.134	.894
Years worked as a school counselor	-.017	.511	-.004	-.033	.974
CASC membership	.105	.354	.033	.295	.769
Gender identity of school counselor	.440	.418	.114	1.053	.295
Ethnicity/race identity of school counselor	.017	.353	.005	.048	.962
Age of school counselor	.041	.436	.012	.093	.926

Results from Collinearity Diagnostics for Regression Model #2

Explanatory Variables	Tolerance	VIF
Urbanicity of school community	.908	1.101
Percentage of students qualifying for free/reduced lunch	.825	1.212
Years worked as a school counselor	.595	1.682
CASC membership	.868	1.152
Gender identity of school counselor	.911	1.097
Ethnicity/race identity of school counselor	.882	1.134
Age of school counselor	.606	1.650

RQ3

REGRESSION MODEL #3

Effect of Explanatory Variables on USIS Scale Scores for Regression Model #3

Variable	Unstandardized Regression Coefficient (B)	Standard Error (B)	Standardized Regression Coefficient Beta	t	Sig.
(Constant USIS Scale Score)	1.311	.379		3.455	<.001
Urbanicity of school community	.681	.391	.179	1.742	.085
Percentage of students qualify free/reduced lunch	.048	.328	.015	.145	.885
Years worked as a school counselor	.023	.379	.006	.062	.951

SUMMARY OF FINDINGS FOR RQ3

RQ3: Which variables, if any, predict/explain these Universal Supports-based beliefs?

- 3 separate linear regression models generated
- Collinearity diagnostics revealed no problems with multicollinearity
- No statistically significant relationships between the independent and dependent variable(s) in each model
- Within this study's findings, none of the variables predicted/explained school counselor beliefs

STUDY

DISCUSSION

Discussion

LIMITATIONS OF STUDY

- Size and scope
  - Sample size, limits to California, limits to high school counselors = limits to generalizability
- Cross-sectional study
  - Captures a picture of beliefs within the context of a crisis, specifically one point in the pandemic
- (Tier 1) Universal Supports focus
  - Limited study of one dimension of a multi-tiered, multi-domain, multifaceted framework
- Limited range of school counselor beliefs captured

Discussion: IMPLICATIONS

- MTSS/MTMDSS continues to become more prevalent for CA school counselors in the COVID-19 era
- Pandemic enters new phase; data emerging, yet significant gaps remain in the literature
- School counselors may believe MTSS/MTMDSS is important, but there is more to learn:
  - Range/complexities of beliefs
  - Tiers, facets, domains of MTMDSS
  - Themes beyond this study's research questions
- Robust validity and reliability checks are important for beliefs scales, and alternate forms of item design and analysis should be considered to optimize efficacious beliefs measurement
- Future deployment of the USIS, with modification, could help facilitate a more complete understanding of beliefs on MTMDSS

Discussion

3 RECOMMENDATIONS for Future Research

Future Research

RECOMMENDATION 1

Emergent Theme:

Ideals of Standards, Realities of Practice, & Conflicting Beliefs

> "I think it's really important. But it's one thing to believe that something is important on its face, and it's another to see it as being as important or to make it happen once my school day begins".
>
> -Interviewee #5

Future Research

RECOMMENDATION 2

Emergent Theme: Immediate Interventions for Practice

- Student connection to school community
- Prioritizing equity within school counseling services
- Mental health/wellness/SEL support
- Address gaps in student learning, motivation, and social-emotional skills post-distance learning

Future Research

RECOMMENDATION 3

USIS Instrumentation and Validation: Next Steps

- Redesign outcome space to different configurations
- Explore use of Guttman items (Guttman, 1944)
- Examine alternative IRT measurement models, such as “unfolding models” for belief/attitude measurement (Andrich, 1988; Liu & Chalmers, 2018)

thanks!
QUESTIONS & COMMENTS

References

AERA, APA, & NCME. (2014). *Standards for educational and psychological testing*. American Educational Research Association.

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Prentice Hall.

Andrich, D. (1988). The application of an unfolding model of the PIRT type to the measurement of attitude. *Applied Psychological Measurement*, *12*(1), 33–51.

ASCA. (2021). *ASCA research report: State of the profession 2020*. https://www.schoolcounselor.org/getmedia/bb23299b-678d-4bce-8863-cfcb55f7df87/2020-State-of-the-Profession.pdf

Azar, K., Lockhart, S. H., Shen, Z., Romanelli, R., Brown, S., Smits, K., & Pressman, A. (2021). *Disparities among racially/ethnically marginalized groups in the COVID-19 pandemic persist regardless of statewide shelter-in-place policies: An analysis from northern California*. Oxford University Press.

Blake, M. K. (2020). Other duties as assigned: The ambiguous role of the high school counselor. *Sociology of Education*, *93*(4), 315–330.

Braun, G., Kumm, S., Brown, C., Walte, S., Tejero Hughes, M., & Maggin, D. M. (2018). Living in tier 2: Educators' perceptions of MTSS in urban schools. *International Journal of Inclusive Education*, 1114–1128. https://doi.org/10.1080/13603116.2018.1511758

Capizzi, L. M., & Bruce, E. (2021). The role of school counselors working with students in foster care: Increasing access to postsecondary educational opportunities. *Journal of School Counseling*. http://www.jsc.montana.edu/articles/v19n52.pdf

CDE. (2022, March 28). California Department of Education. Retrieved April 16, 2022, from https://www.cde.ca.gov/ci/cr/ri/

Duckor, B. (2021a, September). *Beyond the world of instruments: Principles, standards, design*.

Duckor, B. (2019). On validity and reliability. Designing Dissertation Instruments Workshop. [PowerPoint slides]. Canvas@SJSU. https://sjsu.instructure.com/

Duckor, B. M., Draney, K., & Wilson, M. (2009). Measuring measuring: Toward a theory of proficiency with the constructing measures framework. *Journal of Applied Measurement*, *10*(3), 296–319.

Dulaney, S. K., Hallam, P. R., & Wall, G. (2013). Superintendent perceptions of multi-tiered systems of support (MTSS): Obstacles and opportunities for school system reform. *AASA Journal of Scholarship and Practice*, *10*(2), 30–45.

Epstein, S. (2003). Cognitive experiential self-theory or personality. In T. Millon & M. Lerner (Eds.), *Handbook of psychology: Personality and social psychology* (5th ed., p. 159182). John Wiley & Sons. http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.469.2563&rep=rep1&type=pdf#page=168

Fishbein, M., & Ajzen, I. (1975). *Beliefs, attitudes, intentions, and behavior*. Addison-Wesley.

Gazmararian, J., Weingart, R., Campbell, K., Cronin, T., & Ashta, J. (2021). Impact of COVID-19 pandemic on the mental health of students from 2 semi-rural high schools in Georgia. *Journal of School Health*, *91*(5), 356–369.

Goldhaber, D., Kane, T., McEachin, A., Morton, E., Patterson, T., & Staiger, D. (2022). *The consequences of remote and hybrid instruction during the pandemic* [Research Report]. Center for Education Policy Research, Harvard University.

Guttman, L., (1944). A basis for scaling qualitative data. *American Sociological Review*, *9*(2), 139–150. https://doi.org/10.2307/2086306

Hatch, T., & Chen-Hayes, S. F. (2008). School counselor beliefs about ASCA national model school counseling components using the SCPCS. *Professional School Counseling*, *12*(1), 34–42.

Hatch, T., Triplett, W., Duarte, D., & Gomez, V. (2019). *Hatching results for secondary school counseling: Implementing core curriculum, individual student planning, and other tier one activities*. Corwin.

Lambie, G. W., & Williamson, L. L. (2004). The challenge to change from guidance counseling to professional counseling: A historical proposition. *Professional School Counseling*, *8*(2), 124–131. https://www.jstor.org/stable/42732614

Lauterbach, A. A., Harrington, K., Yakut, A. D., & Krezmien, M. (2018). School counselor knowledge, beliefs, and practices related to the implementation of standards-based comprehensive school counseling in the United States. *Journal of School-Based Counseling Policy and Evaluation*, *1*(1), 1–16.

Liu, C.-W., & Chalmers, R. P. (2018). Fitting item response unfolding models to Likert-scale data using mirt in R. *PLoS ONE*, *13*(5). https://doi.org/10.1371/journal.pone.0196292

National Research Council. (2001). *Knowing what students know: The science and design of educational assessment*. National Academy Press. https://doi.org/10.17226/10019

OECD. (2020). *COVID-19: Protecting people and societies* [Version 31]. Organisation for Economic Co-Operation and Development. https://www.oecd.org/coronavirus/policy-responses/covid-19-protecting-people-and-societies-e5c9de1a/?msclkid=ad5c4059cf0c11ec998eba25c81eec44

Olsen, J., Parikh Foxx, S., & Flowers, C. (2020). A confirmatory factor analysis of the school counselor knowledge and skills survey for multi-tiered systems of support. *The Professional Counselor*, *10*(3), 376–392. https://doi.org/10.15241/jo.10.3.376

Paek, I. (2002). *Investigations of differential item functioning: Comparisons among approaches, and extension to a multidimensional context* (3082356) [Doctoral dissertation, University of California, Berkeley]. ProQuest.

Patrikakou, E., Ockerman, M. S., & Feiker Hollenbeck, A. (2016). Needs and contradictions of a changing field: Evidence from a national response to intervention implementation study. *The Professional Counselor*, *6*(3), 233–250. https://doi.org/10.15241/ep.6.3.233

Sailor, W., Skrtic, T. M., Cohn, M., & Olmstead, C. (2021). Preparing teacher educators for statewide scale-up of multi-tiered system of support (MTSS). *Teacher Education and Special Education*, *44*(1), 24–41.

Savitz-Romer, M., Rowan-Kenyon, H. T., Nicola, T. P., Alexander, E., & Carroll, S. (2021). When the kids are not alright: School counseling in the time of COVID-19. *AERA Open*, *7*(1), 1–16. https://doi.org/10.1177/23328584211033600

Sink, C. A., & Yillik-Downer, A. (2001). School counselors' perceptions of comprehensive guidance programs: A national survey. *Professional School Counseling*, *4*(4), 278–288. https://www.jstor.org/stable/42732267

Sullivan, A., Miller, F., McKevett, N., Muldrew, A., Hansen-Burke, A., & Weeks, M. (2020). Leveraging MTSS to advance, not suppress, COVID-related equity issues. *Communiqué*, *49*(1), 1–29.

Wilson, M. (2005). *Constructing measures: An item response modeling approach* (1st ed.). Taylor & Francis.