

Measuring Stigma Types & Quantitative Measurement

FIC Stigma Research Training Institute

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Valerie Earnshaw, University of Delaware

Lawrence Yang, New York University & Columbia University




STIGMA




MEASURE

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graph LR; A[Choosing an existing scale] --> B[Use theory to guide choice]; B --> C[Adapt to new context]; D[Developing a new scale] --> E[Case examples]; E --> F[Considerations];
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Choosing an existing scale

Use theory to guide choice

Adapt to new context

Developing a new scale

Case examples

Considerations

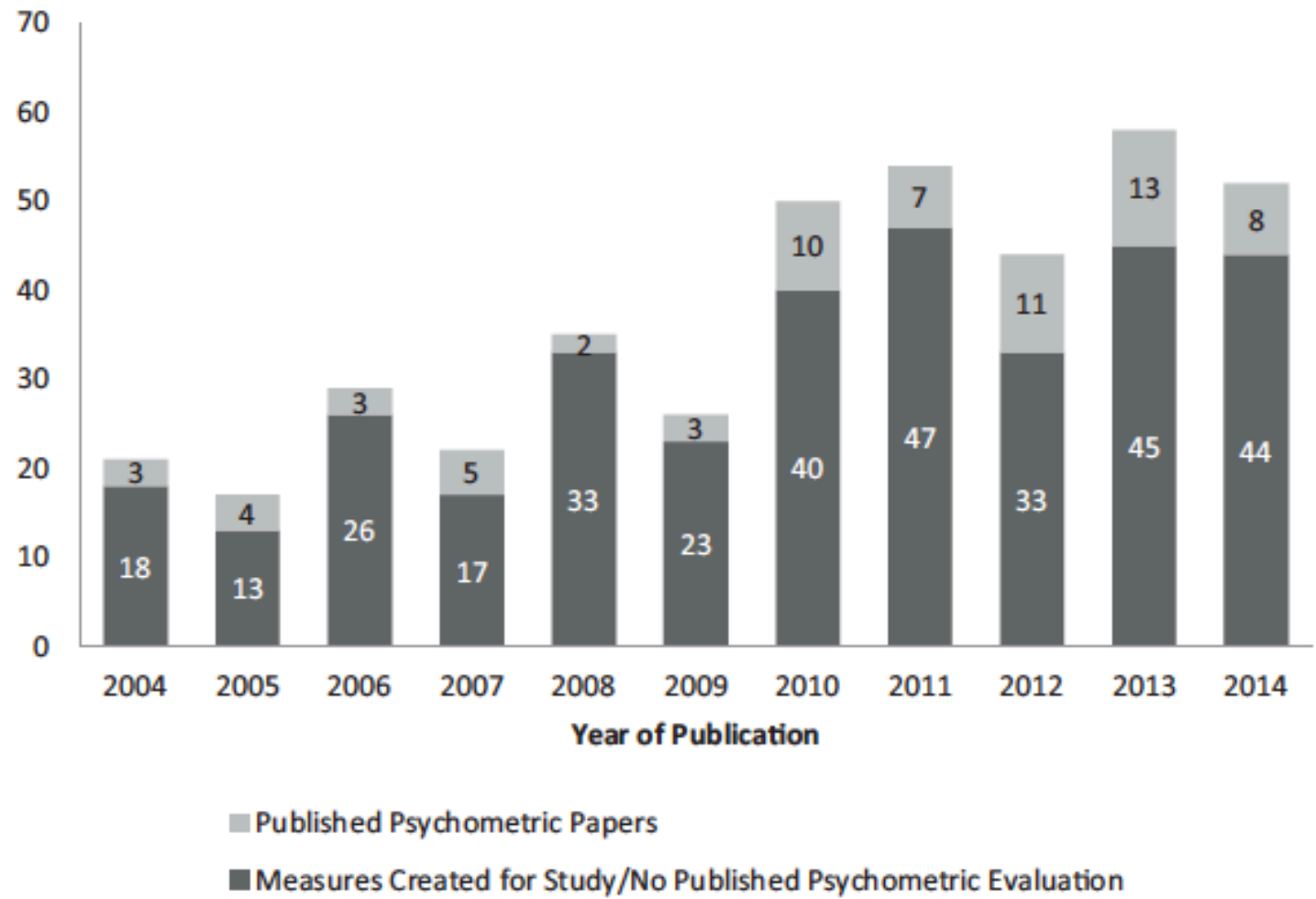


Figure 2. Mental health stigma measures identified in searches of EBSCO/PsycInfo databases, PubMed, and Web of Science, 2004–2014.


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Theory-driven considerations

1. Differentiate between stigma manifestations
2. Focus on sources of stigma
3. Account for intersectionality

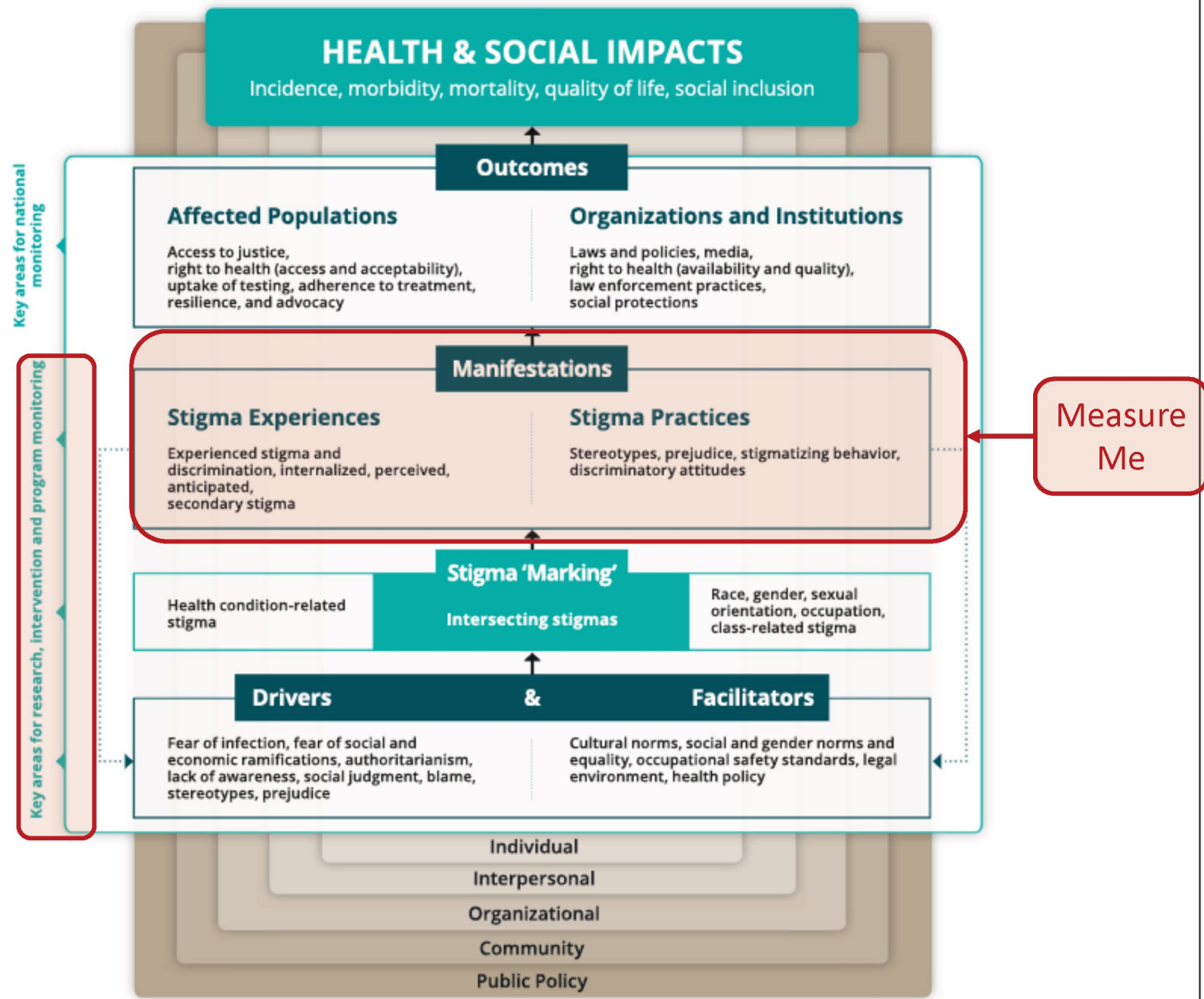


Fig. 1 Health Stigma and Discrimination Framework

Stangl, Earnshaw, Logie, van Brakel, Simbayi, Barre & Dovidio (2019)

Differentiate between stigma manifestations: **Why?**

- Stigma scales often mix questions for different stigma manifestations
- Problem because impossible to know which stigma manifestation(s):
 - Participants are experiencing more of
 - Is/are leading to bad health outcomes

TABLE 3. *Perceptions of Stigma of HIV-Positive Women*

	Often		Sometimes		Rarely		Not at All	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Felt blamed by others for illness	6	7.3	18	22.0	3	3.6	55	67.1
Felt ashamed of illness	23	28.0	25	30.5	6	7.3	28	34.1
Thought illness was punishment for things done in past	19	23.2	22	26.8	3	3.7	38	46.3
Feared I would lose my job if someone found out ^a	16	28.1	8	14.0	1	1.8	32	56.1
Felt compelled to change my residence because of illness	14	17.1	6	7.3	5	6.1	57	69.5
Avoided getting treatment because someone might find out	6	7.3	6	7.3	3	3.7	67	81.7
Feared people would hurt my family if they learned about my illness	20	24.4	14	17.1	8	9.8	40	48.8
Thought other people were uncomfortable being with me ^b	19	23.5	26	32.1	10	12.3	26	32.1
Felt people avoiding me because of my illness ^c	16	20.3	13	16.5	9	11.4	41	51.9
Feared I would lose my friends if they learned about my illness	26	32.1	18	22.2	4	4.9	33	40.7
Feared my family would reject me if they learned about my illness	16	19.5	12	14.6	4	4.9	50	61.0
Felt I wouldn't get as good health care if people learned about my illness	9	11.0	10	12.2	3	3.7	60	73.2
People who know I am HIV positive treat me with kid gloves ^d	12	15.0	8	10.0	5	6.2	55	68.8

^aTwenty-five participants responded "not applicable" ($n = 57$). ^bOne response missing ($n = 81$). ^cThree responses missing ($n = 79$). ^dTwo responses missing ($n = 80$).

Differentiate between stigma manifestations: **How?**

1. Use different scales

2. Use one scale, with subscales, example:

- Substance Use Stigma Mechanism Scale¹
- Subscales:
 - Enacted (experienced) stigma
 - Anticipated stigma
 - Internalized stigma

¹Smith, Earnshaw, Copenhaver, & Cunningham (2016)

Table 3

Structural validity: five-factor SU-Stigma Mechanism model standardized estimates (N = 178).

Construct	Source	Item	Factor loading	(SE)	
Enacted Factor 1	FAM	1. Family members have thought that I cannot be trusted	0.914***	(0.017)	
	FAM	2. Family members have looked down on me	0.964***	(0.011)	
	FAM	3. Family members have treated me differently	0.972***	(0.010)	
	Factor 2	HCW	4. Healthcare workers have not listened to my concerns	0.884***	(0.026)
		HCW	5. Healthcare workers have thought that I'm pill shopping, or trying to con them into giving me prescription medications to get high or sell	0.925***	(0.019)
	HCW	6. Healthcare workers have given me poor care	0.958***	(0.014)	
Anticipated Factor 3	FAM	7. Family members will think that I cannot be trusted	0.951***	(0.011)	
	FAM	8. Family members will look down on me	0.950***	(0.013)	
Factor 4	FAM	9. Family members will treat me differently	0.953***	(0.012)	
	HCW	10. Healthcare workers will not listen to my concerns	0.891***	(0.020)	
	HCW	11. Healthcare workers will think that I'm pill shopping, or trying to con them into giving me prescription medications to get high or sell	0.948***	(0.016)	
	HCW	12. Healthcare workers will give me poor care	0.913***	(0.019)	
Internalized Factor 5	SELF	13. Having used alcohol/drugs makes me feel like I'm a bad person	0.905***	(0.017)	
	SELF	14. I feel I'm not as good as others because I use alcohol/drugs	0.942***	(0.011)	
	SELF	15. I feel ashamed of having used alcohol/drugs	0.873***	(0.020)	
	SELF	16. I think less of myself because I used alcohol/drugs	0.911***	(0.014)	
	SELF	17. Having used alcohol/drugs makes me feel unclean	0.848***	(0.023)	
	SELF	18. Having used alcohol/drugs is disgusting to me	0.798***	(0.029)	

FAM = 'Family members' stigma source, HCW = 'Healthcare Workers' stigma source. Factor loading is significant at 0.001 (***), 0.01 (**), or 0.05 (*) level (2-tailed).

Focus on sources of stigma: **Why?**

- From whom?
 - Stigma scales often don't ask about sources of stigma
 - Sources: family, friend, employer, healthcare provider, others

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Focus on sources of stigma: **How?**

- Use subscales to measure enacted + anticipated stigma from different sources

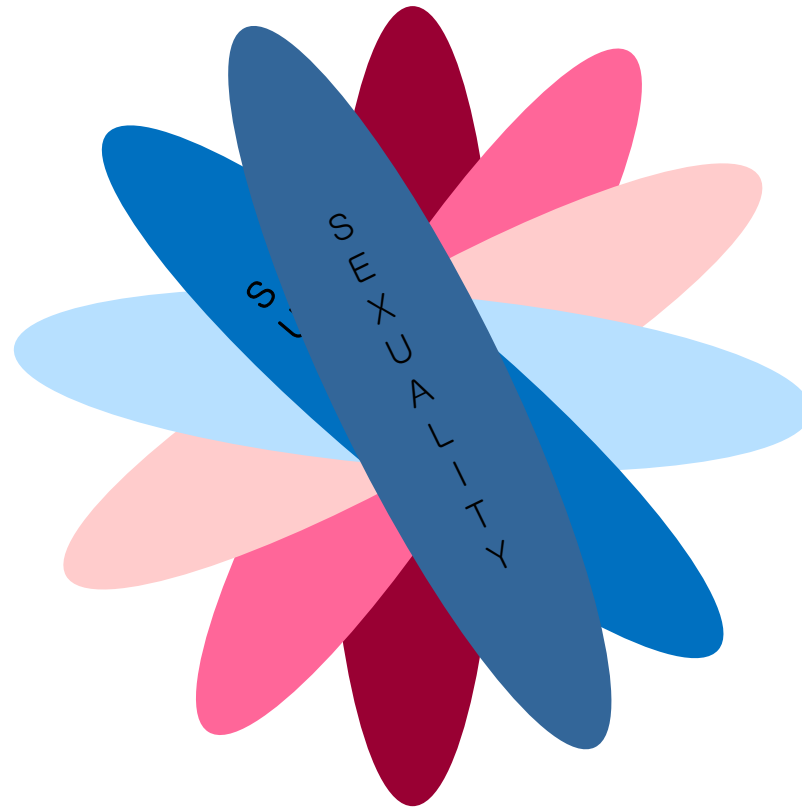
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Account for intersectionality: **Why?**



Collins (1990), Crenshaw (1991),
hooks (1989) Rosenthal (2016);
Slide Credit: Lisa Rosenthal, Ph.D.



Collection on: Stigma Research and Global Health

CORRESPONDENCE

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Challenges and opportunities in examining and addressing intersectional stigma and health



Janet M. Turan^{1*†}, Melissa A. Elafros^{2†}, Carmen H. Logie^{3,4}, Swagata Banik⁵, Bulent Turan⁶, Kaylee B. Crockett⁶, Bernice Pescosolido⁷ and Sarah M. Murray⁸

Account for intersectionality: **How?**

Generalist

- Measure experiences of stigma in general (participants can make attributions)
- E.g., Everyday Discrimination Scale², Intersectional Discrimination Index³

Account for intersectionality: **How?**

Table 1
Loadings From A Four-Factor Exploratory Factor Analysis With Oblique Oblimin Rotation and WLSMV Estimation In The Educational Diversity Project

Item	Factors			
	1	2	3	4
You are treated with less courtesy than others	1.02	-0.01	-0.04	-0.03
You are treated with less respect than others	0.81	0.03	0.08	0.09
You receive poorer service in restaurants or in stores	0.45	0.23	0.13	0.04
People act like you are not as smart	0.01	0.86	0.00	0.02
Act as if they are afraid of you	0.01	-0.04	0.76	0.04
People act as if they think you are dishonest	0.00	0.02	0.95	-0.02
People act like they think they are better than you	0.28	0.40	0.18	0.05
You are called names or insulted	-0.06	0.09	0.03	0.83
You are threatened or harassed	0.06	-0.07	-0.03	0.86

Note. Factor loadings in bold represent locally dependent subsets of items (i.e., method factors) resulting from context effects (e.g., item location, item content, and item wording). Factor intercorrelations ranged from $r = .41$ to $.71$.

Account for intersectionality: **How?**

Generalist

- Measure experiences of stigma in general, participants make attributions
- E.g., Everyday Discrimination Scale²

Parallel

- Measure experiences of stigma in relation to several attributions
- E.g., Multiple Discrimination Scale⁴

¹Turan et al. (2019), ²Stucky et al (2011), ³Scheim & Bauer (2019); ⁴Bogart et al (2013), ⁵Rosenthal & Lobel (2018)

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Tailored

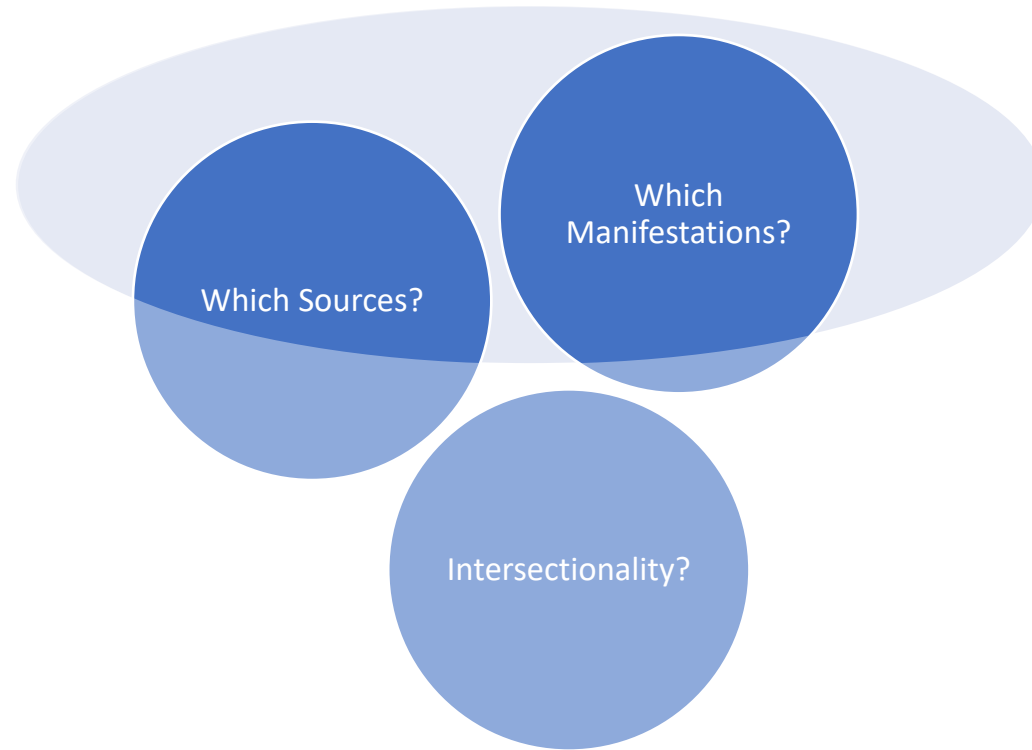
- Measure unique experiences of stigma at the intersection of attributions
- E.g., Gendered Racism Scale⁴

¹Turan et al. (2019), ²Stucky et al (2011), ³Bogart et al (2013), ⁴Rosenthal & Lobel (2018)

Tailored: Gendered Racism Scale

- 15 Likert-type items, anchors reflect frequency [1 (never) – 4 (all the time)]
- Examples
 - “How often do you feel that people make negative assumptions about how many sexual partners you have, based on being a **woman** of your **racial/ethnic background**?”
 - “During your most recent pregnancy, how worried were you that people were making assumptions about whether the father of the child would play a role in raising the child, based on being a **women** of your **racial/ethnic background**?”

Decisions for you to make based on the aims of your study:



Your Measure

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graph LR; A[Choosing an existing scale] --> B[Use theory to guide choice]; B --> C[Adapt to new context]; D[Developing a new scale] --> E[Case examples]; E --> F[Considerations];
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Choosing an existing scale

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Considerations

Cultural Adaptation of Measures- Why do it?

- Adequacy of measure in one culture does not guarantee reliability or validity in another
- Not using culturally sensitive measures may compromise reliability, validity and generalizability of study results



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Instrument Selection

- Prerequisite to yielding valid measure of variable across cultures
 - 1) Instruments already validated cross-culturally– both reliability and validity
 - 2) Instrument has sound psychometric properties in one culture but not tested in other cultures
 - 3) Instrument has high face validity-- requires psychometric testing in country of origin



Overview

- Cultural Adaptation of Measures
 - Five Types of Equivalence
 - **Content**-- Content of each item of the instrument is relevant to the phenomena of each culture
 - **Semantic**--Meaning of each item same in each culture after translation
 - **Technical**--Method of assessment comparable with respect to data that it yields
 - **Criterion**--Instrument's relationship to previously established and independent criteria for the same phenomena
 - **Conceptual**--Instrument measuring same theoretical construct in each culture



Content Equivalence

- Show that test items sample the universe of possible items related to the concept of interest
 - i.e., shows “Content Validity”
- If content validity has been established in the original culture:
 - Content of each item of the instrument is relevant to the phenomena of each culture



Content Equivalence

- Does the phenomenon (item) occur in and is noticed by members of the culture?
 - Content team (experts of the phenomenon from each culture) rates each item as: 1) relevant, 2) irrelevant, or 3) questionably relevant for each new culture
 - Can eliminate items rated as irrelevant (one member) or questionably relevant (two members)



Content Equivalence

- If any items eliminated– reliability of modified instrument must be reexamined
 - If eliminated items not substituted:
 - » Advantage: can apply single instrument across cultures
 - » Disadvantage: if too many items dropped, internal consistency may be too low



Content Equivalence

- May need to add new items to:
 - » 1) achieve content equivalence and
 - » 2) restore internal consistency
- Find equivalent content areas in each culture on an item-by-item basis
 - » yields two different instruments equivalent in content
- What if you want to add culturally-salient items?
 - Disadvantage: no longer directly comparable to one another cross-culturally
 - One solution: Can add new “cultural” items at the end of the questionnaire



Content Equivalence (Example)

- Section A: Devaluation- Discrimination
- “I am now going to read you some statements about how most other people in your community may think about or treat people with mental illness.”
- Questions re: Patient:
- 1) Most people in your community think that a person with a serious mental illness is dangerous and unpredictable.
- 2) Most people in your community feel that having a mental illness is worse than being addicted to drugs
- 3) Most people in your community would accept a person who once had a serious mental illness as a close friend.



Content Equivalence (Example)

- 4) Most people in your community look down on someone who once was a patient in a mental hospital
- 5) Most employers will hire a person who once had a serious mental illness if he or she is qualified for the job
- 6) Most people in your community think less of a person who has been a patient in a mental hospital
- 7) Most people in your community feel that entering psychiatric treatment is a sign of personal failure
- 8) Most people would not marry a man who has been treated for a serious mental disorder
- **9) *Most people in your community think that having mental illness would cause a person to lose face (new Culture-specific item)***



Content Equivalence

- Original:
- 6) Most people in your community think less of a person who has been a patient in a mental hospital
 - “Think less of a person” too close to “look down on”
 - Chinese- Replaced with phrase “is incomplete (or not a full person)”- analogous concept that certain persons who are ill or are not fully adult yet “are not whole”
- 7) Most people in your community feel that entering psychiatric treatment is a sign of personal failure
 - “sign of personal failure” difficult to translate accurately
 - Chinese- replaced with phrase “is a sign of personal disgrace”.



Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
Patient Devaluation Discrimination re: patient Q1 Dangerous	20.9130	8.356	.513	.478	.672
Patient Devaluation Discrimination re: patient Q2 Addicted to Drugs	21.4565	8.862	.221	.511	.733
Patient Devaluation Discrimination Q3- Reverse scored	21.0652	8.393	.459	.399	.681
Patient Devaluation Discrimination re: patient Q4 Look down on	21.0000	8.864	.357	.433	.700
Patient Devaluation Discrimination P5- Reverse scored	21.1522	10.374	-.056	.351	.769
Patient Devaluation Discrimination re: patient Q6 Not complete person	20.8913	8.954	.433	.480	.689
Patient Devaluation Discrimination re: patient Q7 Not proud of	20.9565	7.953	.625	.547	.651
Patient Devaluation Discrimination re: patient Q8 Not married	20.7174	7.132	.675	.547	.629
Patient Devaluation Discrimination re: patient Q9 Lose face	20.7174	8.905	.447	.531	.687


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Inadvertent Effects on Measurement

- Advantages to prior approach:
 - Enhancing scale reliability
 - Enhancing generalizability
 - Enhancing comparability across contexts
- Approaches inadvertently neutralize/diminish culture's importance

Measuring Culturally- Salient Aspects of Stigma

Review of Culture-Salient elements within stigma measures (*Yang, Thornicroft, Alvarado, Vega, Link, 2014- Int. J of Epidemiology*)

- Literature Review (1990- 2012) of MI stigma in non-Western settings
- 5,292 abstracts-- 196 articles
- 77% of studies used translations of Western (U.S., U.K.) developed measures
- ****ONLY 2%** of studies used quantitative stigma measures developed within a non-Western European cultural group**
- 16.8% of studies used qualitative methods; demonstrated culturally-salient stigma processes

How can we address this glaring gap in understanding and measuring how stigma manifests in different cultural settings?

Operationalizing Culture

- Engage in what ‘matter most’ is to certify an individual as having full standing within a cultural group.
 - **These activities can be empirically identified and operationalized.
 - Advanced a new theory for stigma
-
- Yang et al (2014) Recent advances in cross-cultural measurement in psychiatric epidemiology: utilizing ‘what matters most’ to identify culture-specific aspects of stigma. *International J of Epi*

- NIMH K-award (2006-2010)
 - Chinese immigrants with psychosis in NYC
- Mental illness stigma acts in **culture-specific ways** to *impair* an actor's capacity to take part in the **core, everyday engagements** that certify one as a fully viable (or “fully moral”) member of a local community (*Yang, Kleinman et al, 2007, Soc Sci and Med*)

Proposal:

Stigma will coalesce most forcefully around a Motswana woman's capacity to:

- *Bear and raise* **children**
- *Respect* **her husband**
- *Be the foundation* **for her home**

“With women, *if you don't have children you are not really a woman*” (Woman– Known HIV status)

Formulation:

-Perceived Promiscuity Violates 'Womanhood' to Intensify HIV Stigma

“They (other people) *think that someone living with HIV was very sexually active and promiscuous* even though they may be wrong, they don't think of other ways of HIV transmission. Batswana mostly think that *if you have HIV then it means you had unprotected sex with multiple partners-* (Woman– Known HIV status)

III. FULFILLING CAPABILITIES AS A “GOOD MOTHER” CAN MITIGATE STIGMA

Formulation:

If HIV occurs without affecting capabilities by which ‘personhood’ is judged, stigma may not affect one’s claim to ‘womanhood’.

“*The woman who has HIV will be treated better, having children* (compared to a childless person without HIV)...*Because that person has dignity*”- (Man- Unknown HIV status)

Study 2: Operationalizing ‘What Matters Most’

(Yang, Ho-Foster*, et al, 2020,
AIDS and Behavior)*

What Matters Most

WHAT MATTERS MOST *text*

They (other people) *think that someone living with HIV was very sexually active and promiscuous* even though they may be wrong, they don't think of other ways of HIV transmission. Batswana mostly think that *if you have HIV then it means you had unprotected sex with multiple partners-*

WHAT MATTERS MOST *items*

“Most Batswana believe that a woman with HIV was promiscuous before marriage.”

“WHAT MATTERS MOST” FOR WOMEN (N=98 INDIVIDUALS IDENTIFIED WITH HIV)

Cultural Factors Shape Stigma

Most Batswana believe that a woman with HIV is unable to take care of her children.

Most Batswana believe that a woman with HIV does not have the ability to properly take care of her home.

Most Batswana believe that a woman with HIV is not a reliable foundation for her family.

Most Batswana believe that a woman with HIV was promiscuous before marriage.

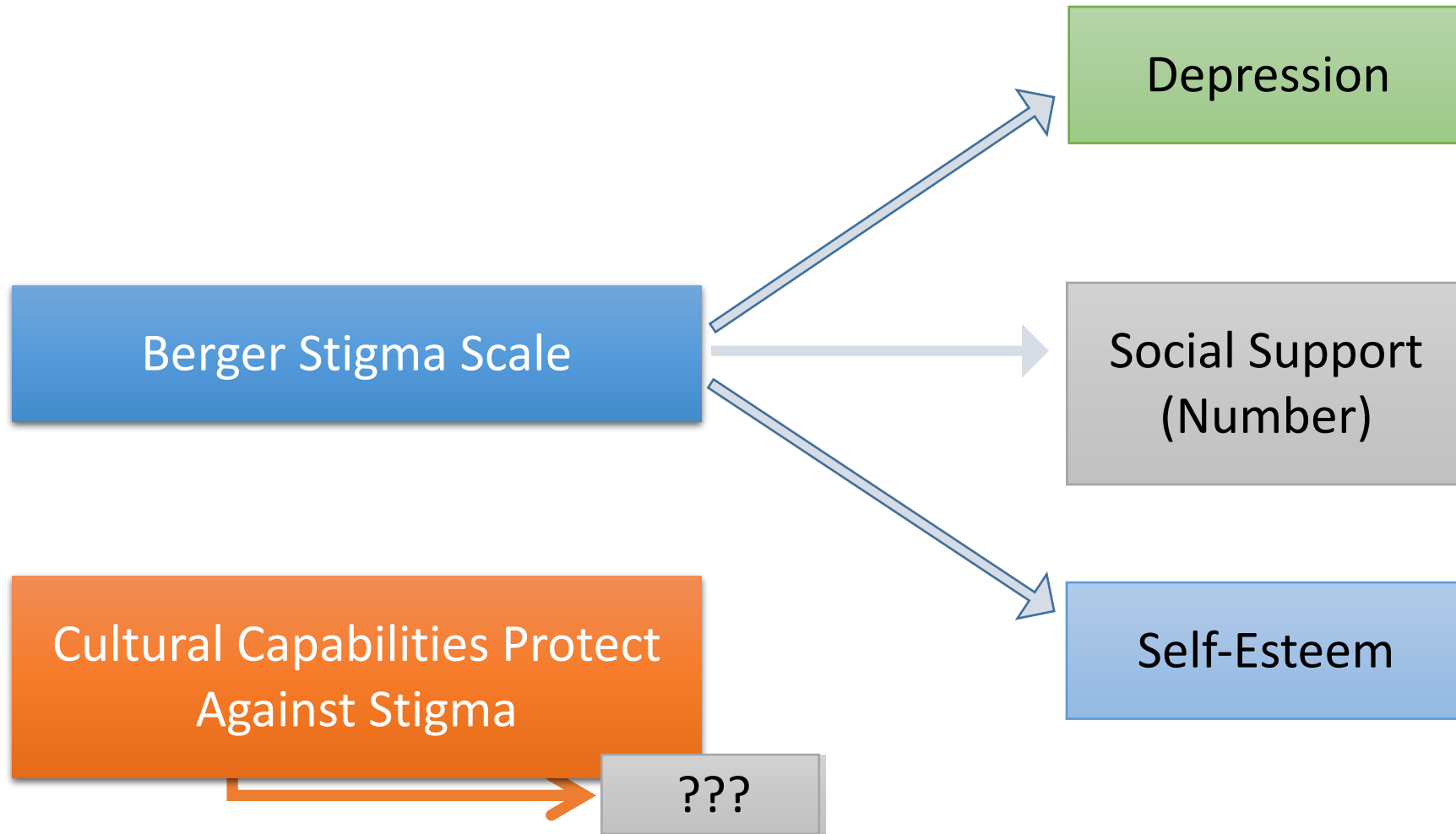
Culture Capabilities Protect Against Stigma

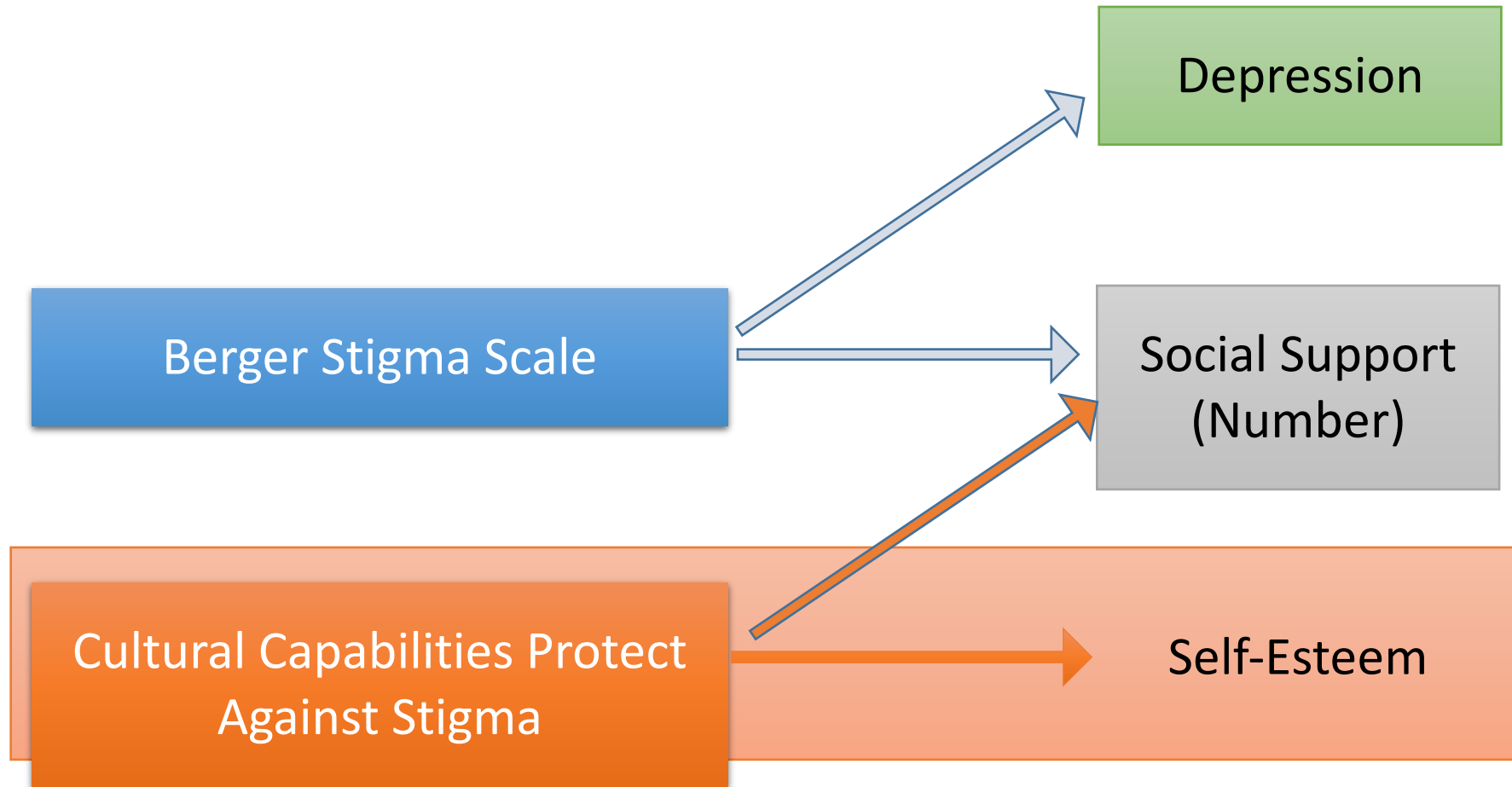
Most Batswana will not look down on a woman with HIV who is loyal to her husband.

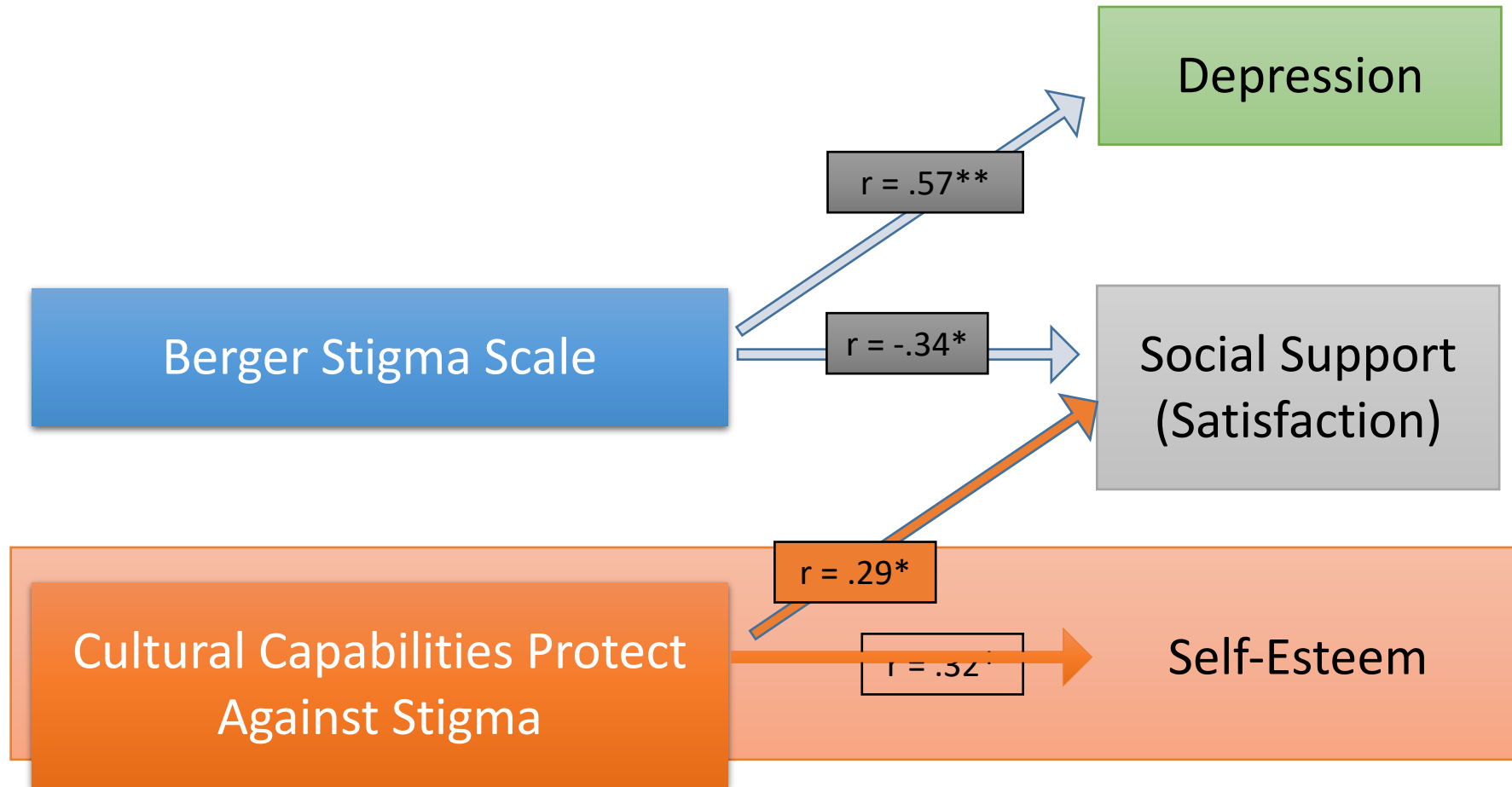
Most Batswana will not look down on a woman with HIV who has children.

Most Batswana respect a woman with HIV who raises successful children

Most Batswana will respect a woman with HIV who properly cares for her husband.







Comparison Across Cultures

- Comparing culturally-salient scales across cultural groups with scales consisting of different items is more complex
- Could use both standardized and culturally-salient measures, thus enabling direct comparison + assessment of local forms
- Comparison of culturally-salient forms might be evaluated for commonalities and variations across cultures, thus promoting further understanding of a construct's 'universal' aspects.
- Use of culturally-valid instruments might promote interventions that are effective within local contexts

Case Example 2: Chronic Illness Anticipated Stigma Scale

“The consequences of stigma are remarkably similar in different health conditions, cultures and public health programmes”

“Development of generic instruments to assess health-related stigma may be possible”

Development and psychometric evaluation of the Chronic Illness Anticipated Stigma Scale

Valerie A. Earnshaw · Diane M. Quinn ·
Seth C. Kalichman · Crystal L. Park

Received: August 3, 2011 / Accepted: March 31, 2012 / Published online: April 13, 2012
© Springer Science+Business Media, LLC 2012

Abstract The Chronic Illness Anticipated Stigma Scale (CIASS) was developed to measure anticipated stigma (i.e., expectations of prejudice, stereotyping, and discrimination) among people living with chronic illnesses. The CIASS is a 12-item scale with three subscales differentiating among sources of anticipated stigma, including friends and family members, work colleagues, and healthcare workers. Results support the reliability, validity, and generalizability of the CIASS in two samples of people living with chronic illnesses. The CIASS was correlated with other stigma-

Introduction

I feel so embarrassed by this—this thing... Who would want a wife like this? How can I go out and not feel unable to look people in the eyes and tell them the truth? Once I do, who would want to develop a friendship, I mean a close one? (Milo quoted by Kleinman, 1988; p. 163)

Table 2 Structural validity of the CIASS: factor loadings from confirmatory factor analysis

Item

Friends and family

- A friend or family member will think that your illness is your fault
- A friend or family member will not think as highly of you
- A friend or family member will blame you for not getting better
- A friend or family member will be angry with you

Work colleagues

- Someone at work will think that you cannot fulfill your work responsibilities
- Your employer will assign a challenging project to someone else
- Someone at work will discriminate against you
- Your employer will not promote you

Healthcare workers

- A healthcare worker will blame you for not getting better
 - A healthcare worker will be frustrated with you
 - A healthcare worker will give you poor care
 - A healthcare worker will think that you are a bad patient
-

** $p \leq .001$

Case Example 2: Chronic Illness Contexts

- Autism
- Cancer
- Chronic Neurological and Pulmonary Diseases
- Diabetes
- Multiple Sclerosis
- Obesity
- Parkinson's Disease
- Pernicious Anaemia
- Rheumatic Diseases
- As well as samples with various chronic illnesses

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Team



Resources

- Courses/Trainings
 - Psychometrics
 - Scale Development
 - Item Response Theory
- Books + articles
 - DeVellis RF. Scale development: Theory and applications. Sage publications; 2016.
 - Articles in resource page of Moodle

