THE NEED FOR MEASURING IMPAIRMENT IN FUNCTIONING FOR ASSESSING SED: *Review of Measures*

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WHAT IS OUR DEFINITION OF IMPAIRMENT?

- Propose a definition based on the classificatory system of the International Classification of Functioning for Youth (ICF-CY)
- Disabilities are negative functional outcomes (from now on referred to as impairment) resulting from health conditions, involving significant deviation from or loss of "normal" or "expected" function.

Negative functional outcomes can occur at the…

individual level

- as activity limitations (difficulties the child may have at executing activities) and at the

societal level

- as resulting in restrictions in participation or problems the child may have in typical life situations such as at school, or with peers, with his/her family and in the community at large.

CAN WE DISENTANGLE IMPAIRMENT FROM PSYCHIATRIC DISORDER?

However, in mental health (as in diabetes for ex) this is not possible

The ICF-CY implies that disease is separate from impairment

In the absence of clear biological markers or clinically useful measurements of severity, it is not possible to separate normal and pathological symptom expressions. Particularly true for anxiety disorders & young children.

- A diagnostic criterion requiring distress or disability has been used to establish disorder thresholds in DSM 5 (as well as prior DSM's).
- Thus, the identification of the health condition is dependent upon the presence of functional impairment.

WHY MEASURE IMPAIRMENT IN FUNCTIONING SEPARATE FROM DIAGNOSIS

Required by Public Law 102-321 mandates the provision of MH services …

… only for children who have severe emotional disturbance (SED),

defined as children who meet DSM 5 who also have substantial impairment in functioning

Legislation separates impairment from disorder, although we know it is not possible.

Classification of impairment has become a necessary requirement for the reimbursement of MH services & a necessary criterion for the allocation of resources.

IMPAIRMENT IS BEST PREDICTOR OF NEED FOR SERVICES

Declines in functioning, unexpected behavioral deviations and disruptive behavior

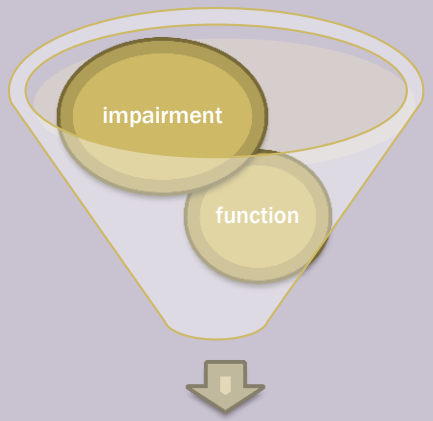
are the most common reasons that MH services are first sought for children.

Impairment in functioning

is more likely to lead parents to take their children into treatment than a psychiatric disorder

Perception of disability appears to be more significant than

diagnosis in predicting service utilization in most epidemiologic studies.



IMPAIRMENT IS THE PIVOTAL INFORMATION ON WHICH INTERVENTIONS ARE IMPLEMENTED

DIAGNOSIS

- is important for prognosis but impairment in functioning is the determining factor in planning and developing an intervention

IMPROVEMENT IN FUNCTIONING

- is the main outcome used for determining effectiveness of an intervention.

IMPAIRMENT IN FUNCTIONING IS PREVALENT

Results from 2001-2003 show that approximately *5% of children had definite or severe* (quite a lot or a great deal) impact score in the SDQ (Simpson et al, 2005).

U.S. National Health Interview Surveys

Medical Expenditure Panel Surveys

Using the CIS Olfson et al (2015) found that *10.7% of the population had severe mental health impairment* from 2010-2012 a decrease from 12.8% in 1996-1998.

THE NEED FOR OPERATIONALIZING "SUBSTANTIAL OR SIGNIFICANT" IMPAIRMENT

The criteria for establishing the symptom according to DSM IV or 5 disorder are well established

however, the decision of what constitutes substantial impairment in social, occupational or other areas of functioning is variable.

To this date what constitutes substantial impairment is arbitrary depending on the *clinician or measurement instrument used, or population based statistical scores.*

HOW CAN WE MEASURE SUBSTANTIAL IMPAIRMENT IN FUNCTIONING?

Because of lack of clarity conceptually, some impairment measures determine severity empirically by establishing population norms and determining cut offs based on cost or research purpose.

Measures	Scores	
WHO-DAS 12	RTI 0 to 58	17 would correspond to the 90th percentile thus around 10% of the population would have a score greater than 17%, score of 31 for 5% of population.
BIS, CIS	(impaired /not impaired)	based on specificity and sensitivity of instrument, but offer no guidance for determining severity of impairment.

WHAT IMPAIRMENT MEASURE IS BEST SUITED TO COMPLY WITH DEFINITION OF SED?

A. Scoring for determining severity or significant impairment

B. Ideally should be multidimensional, that is, assess specific areas of functioning (i.e. school, family, friends).

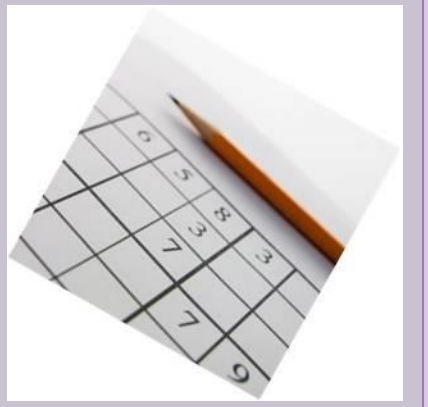
C. Should be applicable to a wide range of ages or have different versions depending on age

D. Have parent and child versions

E. Have good psychometric properties for US population and preferably have Spanish version with psychometrics.

F. Does not require prior knowledge of the child

WHICH MEASURE MEETS ALL IDEAL REQUIREMENTS?



- Field has not changed much regarding measures of impairment since 1999.
- My answer, is still NONE, Child WHO-DAS has potential but based on ICF which is not known or generally accepted in the US by clinicians
- There is progress on conceptual definition of construct since the publication of the Child ICF.
- The problem for measurement persists, due to the imprecise operationalization and validity of the construct as defined by the ICF-Y particularly for mental disorders and clinical use

WHAT ARE ADVANTAGES/LIMITATIONS OF OUR PROPOSED DEFINITION OF IMPAIRMENT?

Advantages:

- Based on an International Classification for which there is a training manual that can be used by clinicians
- Provides clinician with criteria that offer guidance for assessing different types of disability and the contextual factors (school, family, community/culture) that might contribute to the presentation, occurrence and outcome of mental or physical disabilities.
- It is thus a multidimensional construct that can be useful for treatment and prevention of both physical and emotional disabilities

DISADVANTAGES OF ICF-CY DEFINITION OF IMPAIRMENT

- Its applicability to children with SED is limited.
- The WHO-DAS for adults was used with adolescents in NCS-R, psychometric data can be made available if analyzed, but only for adolescents
- For children a DSM 5 workgroup developed a child version based on adapting the items of the adult WHO-DAS to children
- No published psychometric data on English or Spanish for Child WHO-DAS
- Not clear who has propriety of this instrument, APA or WHO?
- Was used in DSM 5 clinical trials- psychometric data is yet to be published

SHALL WE CONSIDER USING THE CHILD WHO-DAS?

- It depends- Many Ifs
  - Whether APA would release psychometric data that permit development of cut off points, and age specific psychometrics of the instrument
  - Whether division of mental health of WHO is willing to allow further developing of the instrument
  - Whether data from adult WHO-DAS used with adolescents shows good psychometrics (Dr. Merikangas)
  - Further development of child WHO-DAS is ideal, but questionable if the one proposed (adapted from adult) should be used or one developed for children from scratch

WHAT OTHER OPTIONS DO WE HAVE? WHAT SHOULD BE EXCLUDED?

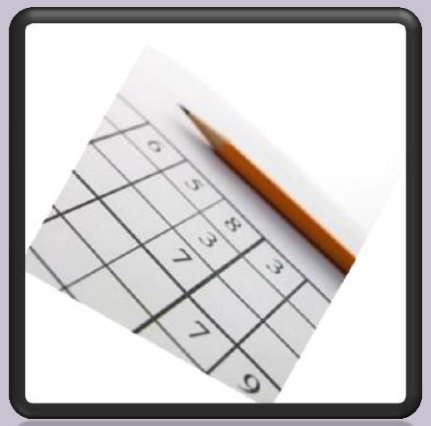
If we are to follow consensus of SAMHSA expert panel,

- we should propose and instrument that is independent of psychiatric disorders and symptomatology

That would exclude impairment scales resulting from psychiatric symptoms

- such as those found in DISC and CAPA

WHAT EXISTENT SCALES INDEPENDENT OF DX WITH PSYCHOMETRICS SHALL WE CONSIDER BASED ON OUR CRITERIA FOR IDEAL SCALE?



	SCALES
CAFAS	Child and Adolescent Functional Assessment Scale
PECFA	Pre-school version
BERS	Behavioral and Emotional Rating Scale
BIS	Brief Impairment Scale
CIS	Columbia Impairment Scale
C-GAS	Child Global Assessment Scale

GLOBAL MEASURES

Impairment Measure	Severity Score, Cut Off	Time Admin (minutes)	Age Range	Parent Child	Advantage	Disadvantage
CIS	Cut off No severity scores	3 (13 items)	7-17	P,C	No training, good psychometrics English/ Spanish, short (12 items)	No severity score, not applicable for <7 years, 3 items confounded with symptoms
C-GAS	Yes*	5	4-16	P,C	Good psychometrics English/Spanish, short, Severity cut offs	Not applicable <4, dependent on prior knowledge of the child and what interviewer/parent thinks is normal functioning; confounded with symptoms
SDQ-Impact	Yes**	2 (5 items)	2-17	P,C, T	Good psychometrics and predictive validity, several languages including Spanish, used in large National CDC Survey, wide age range, short	Not tested in children below 5, Out of 5 items, only three refer to impact, . Difficulty disentangling impact from symptoms. All items refer to difficulties with emotions, concentration, behavior or getting along with others. Measures outcome not impairment

BIS= Brief Impairment Scale; ***C-GAS*** = Child Global Assessment Scale , **SDQ =** Strengths and Difficulties Questionnaire

***Global Cut off**= Refers to results of ROC analyses where a cut off is determined using external criteria (i.e. mental health service use, another instrument with psychometrics) to determine a cut off that determines whether the participant is impaired or not. Does not determine severity of impairment

**Scores 0-10, 0= No problem, 1= Minor problem, 2-10 Definite and severe problem,

MULTIDIMENSIONAL MEASURES

Impairment Measure	Severity Score, Cut Off	Time Admin (minutes)	Age Range	Parent Child	Advantage	Disadvantage
CAFAS	Yes	30 (97 items)	5-19	P,C	Good psychometrics, Spanish version, severity cut offs, wide age range, PCFAS version	Dependent on prior knowledge of the child's symptoms and level of functioning for 10 min administration, intertwines symptoms with impairment
PECFAS	Yes	30	0-6	P	Same as above	Same as above
BIS	Global cut off, no severity	10 (23 items)	4-17	P	English/Spanish versions, good psychometrics, brief	No tested child version, not applicable <4
BERS	No	15 (52 items)	0-5,6-18	P,C,T	Wide age range, focuses on strengths, used mostly for placement children, and treatment goals	Requires knowledge of child, has not been tested in other than Whites, no Spanish version

CAFAS= Child and Adolescent Functional Assessment Scale; PECFAS= Preschool and Early Childhood Functional Assessment Scale; BIS= Brief Impairment Scale; BERS= Behavioral and Emotional Rating Scale Global Cut off= Refers to results of ROC analyses where a cut off is determined using external criteria (i.e. mental health service use, another instrument with psychometrics) to determine a cut off that determines whether the participant is impaired or not. Does not determine severity of impairment

CONCLUSIONS

To this date what constitutes substantial impairment is arbitrary

depending on the clinician,

measurement instrument used,

or population based statistical scores.

ICF-Y definition of disability assumes impairment & disease are separate entities- It is not possible with DSM

- This limits the choice of measurement
- None of the existing measures with psychometrics fit the ICF-Y definition or our minimal criteria
- CAFAS meets most of criteria but it is too long

WHAT NEEDS TO BE DONE

Organize work group that would:

- Work in conjunction with SAMHSA to assure their needs for development or adaptation of an impairment measure are met
- Determine whether a new Impairment instruments should be developed or work more on existing ones with secondary data analyses (i.e. Examine CIS data on MEPS, psychometrics of the child WHO-DAS with permission from WHO, shorten CAFAS etc.)

Any other ideas?