Development of the Impact of Event Scale-8 (IES-8): A study in serious mental illness

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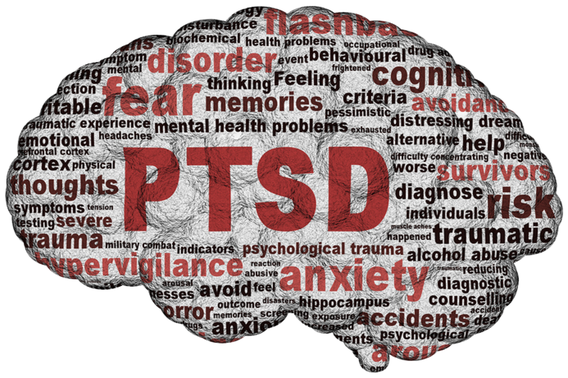
Abstract

- This study originally sought to replicate the findings of Thoresen et al.'s (2010) development of the Impact of Event Scale-6 (IES-6), a six-item abbreviated measure of the Impact of Event Scale–Revised (IES-R)
- Fifty participants diagnosed with serious mental illness (SMI) participated in the current study as part of a larger research study examining empowerment and coercion. The IES-R was administered along with the Brief Symptom Inventory (BSI).
- Following the method used by Thoresen et al. (2010), forward stepwise regression was employed, with the first two items with the strongest predictability retained for each group of symptoms (intrusion, avoidance, hyperarousal).
- Analyses did not support the IES-6 as originally presented and instead suggested an alternative, eight-item measure (IES-8) in accordance with the updated *DSM-5* diagnostic criteria for PTSD.



Introduction

- Thoresen et al. (2010) developed an abbreviated measure of the IES-R by identifying two items loading onto each of the *DSM-IV-TR*'s three diagnostic clusters of PTSD for a total of six items.
- Their sample included individuals that experienced the 2004 Southeast Asia tsunami, Norwegian survivors of non-domestic violence, and Welsh individuals receiving services for a diverse number of unspecified traumatic events.
- Short forms allow for brief evaluation of an individual's current emotional functioning quickly before completing a full evaluation.
- Individuals with SMI are at heightened risk for experiencing a wide range of traumatic events that could present with posttraumatic stress.
- Replication of Thoresen et al.'s (2010) work is useful in three ways:

1. Attempt to independently validate the IES-6's psychometric properties.
2. Examine the IES-6 in light of the revised PTSD symptom clusters as presented in the *DSM-5*.
3. Further our understanding of the SMI population related to posttraumatic stress levels following a traumatic event.

- For these reasons, this study accessed data from an inpatient sample comprised of individuals with a SMI diagnosis.

Method

- Fifty individuals from two state inpatient mental health facilities were involuntarily hospitalized at the time of data collection.
- Each respondent had a documented SMI diagnosis as provided by the facility. Examples of diagnoses included schizophrenia, schizoaffective disorder, bipolar disorder, and major depression.
- The following measures were administered as part of a larger study concerning the roles of coercion and empowerment have on individuals with a documented SMI diagnosis:

1. **Impact of Event Scale-Revised (IES-R)**

- (See abstract)

2. **Brief Symptom Inventory (BSI)**

- 53-item measure that assesses perceived psychopathology across nine domains.
- Global Severity Index (GSI) presented as a T score summary.

Results

- IES-R items were used in a stepwise multiple regression analysis to predict the summed total score, where the largest predictors were added to the equation first.
- Linear regression models were created using only the final items to show the added value of each predictor that was retained.
- Adjusted R^2 of all eight items = .98.
- Cronbach's alpha for all eight items = .90.
- Each symptom cluster had acceptable reliability, except for one:
  - Hyperarousal = .84; Avoidance = .90; Intrusion = .80; Negative alterations in cognitions and mood = .62.
- The only two items that overlapped with Thoresen et al.'s (2010) model were items 3 (intrusion) and 11 (avoidance).
- For convergent validity, BSI scores were correlated with each subscale, the total score from our model, and Thoresen et al.'s (2010) IES-6 model.
- All correlations were statistically significant.

IES-6 Items	Proposed IES-8 Items
3. Other things kept making me think about it.	3. Other things kept making me think about it.
6. I thought about it when I didn't mean to.	7. I felt as if it hadn't happened or wasn't real.
11. I tried not to think about it.	11. I tried not to think about it.
12. I was aware that I still had a lot of feelings about it, but I didn't deal with them.	10. I was jumpy and easily startled.
18. I had trouble concentrating.	13. My feelings about it were kind of numb.
21. I was watchful or on-guard.	15. I had trouble falling asleep.
	16. I had waves of strong feelings about it.
	22. I tried not to talk about it.

Table 1. Beta values and effect sizes for stepwise regression analyses.

Question	β step entered	β final step	R^2 step entered	pr^2 final step	t step entered	t final step
HYP 10	0.866	0.297	.751	.529	12.022	6.787
AVD 22	0.457	0.215	.179	.385	10.956	5.067
INT 3	0.235	0.139	.021	.265	4.487	3.846
INT 16	0.197	0.159	.013	.231	3.995	3.507
HYP 15	0.155	0.159	.010	.388	3.988	5.094
MOOD 7	0.140	0.136	.007	.309	4.104	4.279
MOOD 13	0.077	0.093	.003	.180	2.690	3.000
AVD 11	0.061	0.061	.001	.093	1.292	1.292

Note. All ps < .01 excluding AVD 11 (p = .20). HYP = hyperarousal, AVD = avoidance, INT = intrusion, MOOD = affected cognitions or mood.

Discussion

- Our study is the first to address psychometric utility of the IES-6 in an SMI population.
- The current data did produce promising psychometric support specific to this sample, identifying eight items, not six, that were sensitive to PTSD symptomology.
- Failure to replicate Thoresen et al.'s (2010) study may be due to a variety of reasons, including sample size, population, and context.
- Validation of a short form from its full version using a new sample is highly difficult. Multiple replications should be performed before deeming the instrument psychometric sound across populations.
- A factor analysis might have provided more consistent results across both Thoresen et al.'s (2010) and the current study.

Conclusion

- Our results did not support the IES-6 model as originally proposed by Thoresen et al. (2010) as short form for the IES-R.
- Individuals interested in using the current IES-6 in research or practice should proceed with caution as any short form, including the IES-6, is likely to vary by population.
- Our results suggest the IES-8 as a promising, potentially effective short form, pending additional psychometric validation via increasingly diverse samples and contexts.
- Studies with larger sample sizes and include a wider range of trauma-related experiences are needed to further assess the form's reliability, validity, and utility.

References

For a complete list of references, please refer to the handout.

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