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## TEACHER IRRATIONAL BELIEF SCALE – PRELIMINARY NORMS FOR ROMANIAN POPULATION

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### Abstract

The purpose of this study is the adaptation of the Teacher Irrational Belief Scale – TIBS (Bernard, 1988). The scale was administered to a sample of 242 teachers from 4 high schools and 4 general schools. Our results are, on the whole, consistent with those obtained in earlier normative studies conducted on Australian population. The internal consistency coefficients (Cronbach's Alpha) for the three beliefs and the global score ranged from .48 to .74, which are adequate for using the scale in reliable conditions. The factor analysis revealed 3 principal factors for the Romanian population, related to 3 core irrational beliefs (low frustration tolerance, self-downing and other demandingness). These results are different from those reported on Australian population, where 4 factors were found – low frustration tolerance, self-downing, authoritarianism and demand for justice, but authoritarianism and demand for justice seem to describe Ellis's major irrational belief - other demandingness. The scores of TIBS are related to the scores of the Attitudes and Beliefs Scale 2 (ABS 2).

**Keywords:** Teacher Irrational Belief Scale, irrational beliefs, teachers, norms

### Irrational beliefs of teachers

Rational-emotive behavior therapy (REBT) sees psychological problems as learned maladaptive responses, maintained by irrational beliefs. That is the reason why, in REBT, the therapeutic process targets the identification of irrational beliefs, disputation of these beliefs and the modification of dysfunctional emotions and behaviors (Ellis & Dryden, 1997).

According to REBT (Macavei, 2002) emotional disturbance results from the individual's tendency to make absolutistic and rigid evaluations of perceived

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events. These evaluations are translated into “musts” and “shoulds” (demandingness - DEM). These “musts” lead to other core irrational beliefs:

- Awfulizing beliefs (AWF): an event is evaluated as being more than 100% negative) – awfulizing;
- Low frustration tolerance (LFT): a person thinks that he/she can not be happy if something “that shouldn’t be happening” happens;
- Self-downing and global evaluation (SD/GE): labelling oneself, others or life as being “miserable”, if things don’t work out as expected;

Rational-emotive behavior therapy (REBT) can also be applied in the educational field and in organizations. The extension of REBT in education is represented by rational-emotive behavior education and rational-emotive behavior consultation. Research in these areas focuses on the relationship between irrational beliefs and teacher stress. Over time, REBT was used as a framework for explaining teacher stress (Bernard, Joyce, & Rosewarne, 1983; Forman, 1990), as well as an intervention strategy for decreasing it (Bernard, 1990; Forman, 1990).

Zingle and Anderson (1990) confirmed the REBT hypothesis, according to which the level of teaching stress varies with the degree of endorsement of irrational beliefs.

Moracco and McFadden (1981) underlined the mediating role of cognitive factors in teacher stress. They emphasized the importance of teacher attitudes toward the stressors that appear in the school environment and the role of coping skills in the efficient management of stress. Leach (1984) showed that the discrepancy between perceived work demands and abilities can lead to psychological and biochemical changes, which represent stress reactions.

Even though some situations can be intrinsically stressful, in most situations individuals create their own negative emotions because they evaluate the situation in a certain way. Their dysfunctional reactions result from their beliefs. Although the activating event contributes to what an individual thinks or believes, it does not cause it. Kyriacou (1987) emphasizes the role of cognition in teacher stress by stating that teachers’ perception on their circumstances and the degree of perceived control are crucial factors. Empirical studies show that external locus of control (Harris, Halpin, & Halpin, 1985), tendency toward worry, excessive conscientiousness and high standards (Kyriacou & Pratt, 1985) are related to teacher stress.

Bernard and Joyce (1984) offer a list of irrational beliefs specific to teachers:

1. I must have constant approval from students, other teachers, administrators and parents.
2. Events in my classroom should always go exactly the way I want them to.
3. Schools should be fair.
4. Students should not be frustrated.
5. People who misbehave deserve severe punishment.

6. There should be no discomfort or frustration at school.
7. Teachers always need a great deal of help from others to solve school-related problems.
8. Those who don't do well at school are worthless.
9. Students with a history of academic or behavioural problems will always have problems.
10. Students or other teachers can make me feel bad.
11. I can't stand to see children who have had unhappy home lives.
12. I must be in total control of my class at all times.
13. I must find the perfect solution to all problems.
14. When children have problems, it's their parents' fault.
15. I must be a perfect teacher and never make mistakes.
16. It's easier to avoid problems at school than to face them.

### **Teacher Irrational Belief Scale - description**

Bernard has conducted several studies evaluating the irrational beliefs of teachers. The Teacher Irrational Belief Scale (TIBS; Bernard, 1988), originally composed of 30 items, and finally reduced to 22 items was developed with that purpose. Teachers are asked to indicate, on a five point scale, the extent to which they agree or disagree with an irrational belief (1 = "strongly disagree"; 2 = "disagree"; 3 = "not sure"; 4 = "agree"; 5 = "strongly agree"). High scores indicate high endorsement of irrational beliefs. Subscales score is obtained by adding the scores of items in each subscale.

Items were developed to evaluate 4 irrational beliefs concerning 4 areas of teaching. The four irrational beliefs are: absolutizing, low frustration tolerance, awfulizing and global rating. The four teaching areas related to the 4 irrational beliefs include classroom management problems, student learning/emotional problems, time and workload pressure and problems with school administration. The factor analysis conducted by Bernard (1988) identified 4 principal factors with Eigen values greater than 1. Following item analyses, 22 of the original 30 items remain in the final version of the scale.

A major concern in the development of TIBS was to make sure that all items were cognitively-worded. Smith (1982, 1989) has argued that significant correlations between measures of irrationality and emotionality are methodological artefacts if irrationality scales contain emotionally-worded items (e.g. "I really get angry when students act inconsiderately").

The four factors correspond in many respects to Ellis' hypotheses concerning major irrational beliefs which lead to emotional distress (Ellis & Bernard, 1985). Factor 1, Self-Downing, corresponds to self-oriented demandingness, namely "I must do well and win approval, or else I rate as a rotten person". This factor accounted for 19% of the variance and contains 8 items involving need for approval and achievement, exaggeration of the badness of not

living up to one's expectations and, in particular, putting oneself down for poor performance or disapproval from others. Factor 2, Authoritarianism and Factor 3, Demand for Justice seem to measure Ellis' Other-related Demandingness, namely "Others must treat me considerately and kindly in precisely the way I want them to treat me; if they don't, society and the universe should severely blame, damn and punish them for their inconsiderateness". Factor 2, "Authoritarianism", which accounted for 8.1% of the variance, contains 8 items revolving around teachers' demands for control over students and blaming students for their misbehaviour. Factor 3, "Demand for Justice", accounted for 7.2% of the variance and contains 5 items dealing with teachers' desire for communication and consultation. Factor 4, Low Frustration Tolerance measures what Ellis calls World-related Demandingness and leads to a variety of stress reactions including self-pity and despair. It is expressed in thoughts as: "Living conditions must be such that I practically get everything I want comfortably, quickly and easily, and get nothing I don't want". Factor 4, "Low Frustration Tolerance", accounted for 6.3% of the variance and contains 4 items dealing with teachers' evaluations of the unpleasantness of their work.

The 41.5% of the variance which the 4 factors account for is similar to other recently validated scales of childhood irrationality (Bernard & Laws, 1988) and parent irrationality (Joyce, 1988).

Self-Downing strongly correlate with other factors: .38 with Low Frustration Tolerance and .32 with Authoritarianism. The other factors are weakly correlated among themselves.

## **Method**

### *Participants*

A number of 242 teachers from 4 high schools and 4 general schools in Bihor county participated in this study, as follows:

- the sample used for test-retest reliability is composed of 58 teachers (44 females), aged between 23-64, (mean age = 38);
- the sample used for determining convergent validity was composed of 153 teachers (125 females), aged between 22-64 (mean age = 37.78);
- the sample used for factor analysis and internal consistency was composed of 242 teachers (195 females), aged between 22-64, (mean age = 39.52).

### *Measures*

*The Teacher Irrational Beliefs Scale – TIBS* (Bernard, 1988).

*Attitudes and Beliefs Scale 2* (DiGiuseppe, Leaf, Exner, & Robin 1988).

The scale contains 72 items consisting of a 4x3x2 matrix and is composed by 3 factors. The first factor consists of belief processes and has 4 levels: demandingness, self-downing, low frustration tolerance and awfulizing. The

second factor includes content/context information and has 3 levels: beliefs about affiliation, achievement and approval. The third factor has 2 levels: rationality and irrationality. The scale is a valid measure of Ellis' four irrational beliefs, three of them also measured by the TIBS. It has high internal consistency (.88 for the global score, .68 for AWF, .61 for DEM, .79 for SD and .72 for LFT) and discriminative validity (Macavei, 2002).

#### *Procedure*

The two scales were administered to a sample of teachers: 242 teachers completed the TIBS, 153 teachers also completed the ABS2, and 58 of them were retested with the TIBS.

## **Results**

#### *Factor analysis*

After conducting factor analysis using SPSS for Windows, 6 factors were identified, but the screen plot showed that after the third factor there was a decrease of the Eigen values of the factors. The factor analysis performed by Bernard distinguished 4 factors, so in order to identify the real number of factors we chose to use parallel factor analysis, a method considered highly accurate in determining the number of factors.

In order to perform parallel factor analysis we used a syntax elaborated by O'Connor (2002), which can be used for SPSS data-bases. This syntax is available at: <http://flash.lakeheadu.ca/~boconno2/nfactors.html>. Three factors were identified using parallel factor analysis. Table 1 presents the Eigen values for the TIBS items.

**Table 1.** Eigen values (parallel factor analysis) for TIBS items

Item	Eigen value
1	2.945353
2	1.778587
3	1.391291
4	.800962

Using the SPSS, exploratory factor analysis was subsequently conducted. To decide if all items can be exposed to factor analysis, we used the Kaiser-Meyer-Olkin Measure of Sampling Adequacy and the Bartlett Test of Sphericity. The .72 coefficient indicates that all items can be used. The Bartlett Test of Sphericity yielded a  $\chi^2=945.400$  significant at  $p = .01$ .

The three factors separately accounted for 37.08% of the variance. Before the rotation, the first factor explained 16.47% of the total variance, the second, 11.03%, and the third, 9.57%. After the rotation the hierarchy remained the same,

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but the percentage was different, with the first factor explaining 13.32% of the variance, the second 12.57%, and the third, 11.19%. Table 2 indicates the influence of these 3 factors: the first – 2.93, the second – 2.77 and the third – 2.46; the difference between them is minor.

**Table 2.** Total variance explained

Component	Initial Eigen Values			Rotation		
	Total	% of Variance	% Cumulative	Total	% of Variance	% Cumulative
1	3.62	16.47	16.47	2.93	13.31	15.31
2	2.42	11.03	27.50	2.76	12.56	25.88
3	2.10	9.57	37.08	2.46	11.19	37.08
4	1.47	6.69	43.77			
5	1.21	5.51	49.29			
6	1.04	4.75	54.05			
7	.97	4.43	58.48			
8	.94	4.29	62.78			
9	.86	3.90	66.69			
10	.81	3.69	70.38			
11	.77	3.54	73.92			
12	.72	3.31	77.24			
13	.70	3.20	80.44			
14	.62	2.85	83.30			
15	.57	2.59	85.89			
16	.56	2.56	88.46			
17	.53	2.42	90.88			
18	.48	2.19	93.08			
19	.43	1.97	95.05			
20	.42	1.94	96.99			
21	.34	1.58	98.57			
22	.31	1.42	100			

Extraction method: Principal component analysis

The Rotated Component Matrix (Table 3) shows that the first factor contains 6 items: 15, 16, 14, 13, 17, 19; the second factor contains 8 items: 2, 3, 1, 7, 8, 22, 21, 20 and the third factor contains 8 items: 5, 4, 10, 12, 11, 6, 9, 18. Factor 1 contains the items which Bernard (1988) referred to as *Demand for Justice* and one item from *Authoritarianism*. These two factors are linked to Other-related Demandingness (e.g., school administration, students). According to our model, four of the items are included in the structure of other factors. We

refer to this factor as Demandingness. Factor 2 contains some of the items identified by Bernard as Self-Downing, but also items 22, 21 and 20 additionally. Factor 3 contains the items identified by Bernard as Low Frustration Tolerance and items 5, 4, 6 and 18 additionally.

**Table 3.** The rotated component matrix extraction method: principal component analysis. Rotation method: Varimax with Kaiser normalization; a rotation converged in 7 iterations

	Component		
	1	2	3
tibs15	.68		
tibs16	.58		
tibs14	.58		
tibs13	.58		
tibs17	.57		
tibs19	.52		
tibs2		.67	
tibs3		.64	
tibs1		.48	
tibs7		.48	
tibs8		.44	
tibs22	.31	.43	
tibs21	.37	.38	
tibs20	.36	.36	
tibs5		.33	.70
tibs4			.66
tibs10		.29	-.61
tibs12	.31		-.55
tibs11		.36	-.47
tibs6	.31	.30	.45
tibs9		.40	-.42
tibs18	.29		.36

The three subscales correlate among themselves: Demandingness with Self-Downing ( $r=.22$ ,  $p<.01$ ) and with Low Frustration Tolerance ( $r=.30$ ,  $p<.01$ ). Also, Self-Downing correlates with Low Frustration Tolerance ( $r=.41$ ,  $p<.01$ ).

*Internal consistency*

Psychometric studies conducted on Australian population indicate an adequate internal consistency for the global score and for the subscales. Cronbach’s alpha coefficients range from .70-.85 as follows: Self-Downing - .76,

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Authoritarianism - .78, Demand for Justice - .70, Low Frustration Tolerance - .77, and - .85 for the global score.

The results of our internal consistency analysis indicate somewhat lower values than for the English version, ranging from .48 to .74. Chronbach's alphas for the Romanian version were as follows: Self-Downing - .66, Low Frustration Tolerance - .48, Demandingness - .68, and .74 for the global score. As can be seen, the Low Frustration Tolerance scale has a low coefficient.

#### *Test-retest reliability*

The Spearman Brown Coefficient was used to determine test-retest reliability, and the results were as follows: .80 for the global score, .79 for Self-Downing, .73 for Low Frustration Tolerance, and .64 for Demandingness. Correlations between test-retest global score and subscale scores are significant, as shown in Table 4

**Table 4.** Test-retest correlation for the global score and the three subscales of the TIBS

Scale	R	P
Total	.66	.01
SD	.65	.01
LFT	.57	.01
DEM	.46	.01

#### *Convergent validity*

In order to establish convergent validity of the TIBS, the Attitudes and Beliefs Scale 2 (ABS2) (DiGiuseppe et al., 1988) was used. The coefficients for the global scores and the scores of the subscales of the two instruments (ABS2 and TIBS) are presented in Table 5 below. These results indicate that two of the subscales (i.e., LFT and SD) have low validity coefficients, and further investigations should be conducted to verify the correlations between the scale and other scales.

**Table 5.** Correlations between ABS2 and TIBS (global score and subscales score)

	ABS total	ABS sd	ABS lft	ABS dem
TIBS total	.30**			
TIBS sd		.24**		
TIBS lft			.16*	
TIBS dem				.38**

\*\* Correlation is significant at the .01 level (2-tailed)

\* Correlation is significant at the .05 level (2-tailed)



*TIBS Norms*

Table 6 presents the norms we propose for the global score and subscale scores.

**Table 6.** TIBS Norms (global score and subscales)

	<b>Demandingness</b>	<b>Self-Downing</b>	<b>Low Frustration Tolerance</b>	<b>Total</b>
<b>M</b>	23.57	22.21	22.70	68.49
<b>s.d.</b>	3.35	4.50	3.94	8.76
<b>Very low</b>	0 – 18	0 – 15	0 – 17	0 – 56
<b>Low</b>	19 – 22	16 – 20	18 – 21	57 – 64
<b>Medium</b>	23 – 25	21 – 24	22 – 25	65 – 71
<b>High</b>	26 – 29	25 – 29	26 – 29	72 – 83
<b>Very high</b>	30	30 – 40	30 – 40	84 – 110

### Discussion and conclusions

Research shows that many teachers experience negative dysfunctional emotions when confronted with criticism from others, failures or rating. Also, teachers who experience these emotions hold strong beliefs regarding many aspects of their profession (e.g., disruptive students, preparation for classes, number of hours, meetings, etc.). These beliefs accompany emotional distress or exaggerate it.

School psychologists offering assistance to teachers and the administrative personnel, should take into consideration teachers' irrational beliefs so that they can elaborate adequate interventions for the modification dysfunctional emotions and maladaptive behaviors. The TIBS factor analysis has revealed three factors, which account for 37.08% of the variance. Factor 1, Demandingness, measures a core irrational belief which Ellis calls Other-related Demandingness, namely "Others must treat me considerately and kindly in precisely the way I want them to treat me; if they don't, society and the universe should severely blame, damn and punish them for their inconsiderateness". This factor contains 6 items revolving around teachers' demand for control over students and blaming students for their misbehaviour and teachers' desire for communication and consultation. Factor 2, Self-Downing corresponds to what Ellis describes as Self-related Demandingness, namely "I must do well and win approval, or else I rate as a rotten person". This factor contains 8 items, involving need for approval and achievement, exaggeration of the badness of not living up to one's expectations and, in particular, putting oneself down for poor performance or disapproval from others. Factor 3, Low Frustration Tolerance, measures World-related Demandingness, namely "Conditions under which I live must be arranged so that I get practically all I want comfortably, quickly and easily and get nothing I don't want", It contains 8 items dealing with teachers' evaluations of the unpleasantness of their

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work. The differences in factors found between the Romanian and Australian population can be explained by cultural differences and the social politics of the two countries. The psychometric properties (i.e., internal consistency, test-retest reliability and convergent validity) recommend the Teacher Irrational Belief Scale as a useful measure, but further investigations, on larger samples, should be conducted in order to firmly establish the adequacy of the scale.

#### Author note

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