

Standardization and Validation of Intimacy Attitude Scale–Revised in Tehran University Students

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Article info:

Received: 10 Dec. 2012

Accepted: 01 Mar. 2013

Keywords:

Intimacy, Attitude,
Factor analysis,
University students

ABSTRACT

Objective: Many theorists agree that intimacy is a multidimensional concept and intimacy attitude components are different from intimate behavior components. This research aimed to determine the components of intimacy attitude in university students.

Methods: Based on revised intimacy attitude scale (IAS-R) which was originally developed by Amidon et al. (1983), intimacy attitude components are general intimacy, fear of rejection, loss of control in interpersonal intimacy, and sexual physical closeness. In the present study, 521 university students were evaluated to study the psychometric properties and validation of IAS-R.

Results: The Cronbach α was 0.84 and test-retest correlation was 0.83. Results of factor analysis supported the 4 specific structure components with different subscales. Multivariate analysis of variance corroborated that intimacy attitude is similar in different sexes and ages but varies regarding the above 4 components.

Conclusion: IAS-R showed acceptable psychometric qualities in Tehran university students.

1. Introduction

Answering the question about the nature of intimacy is important to understand its measurement. In an attempt to clarify and measure such an indefinable concept as intimacy, the researchers encountered problems and stated diverging viewpoints. According to Sternberg (1997), intimacy is the crux of relationships: “intimacy refers to the feeling of closeness, connectedness and bondedness in loving relationships” (Sternberg, 1997). Intimacy is “an interpersonal process that involves communication of personal feelings and information to another person who responds warmly and sympathetically” (Reis & Shaver, 1988).

According to Perlman and Fehr (1987) intimacy is “the closeness and interdependence of partners, the extent of self disclosure, and the warmth or affection experienced within the relationships” (Perlman and Fehr, 1987). While the literature provides no unanimous agreement about

what constitutes intimacy, some common themes do exist. There are 8 prominent aspects of intimacy: Physical intimacy, non-verbal communication, self-disclosure, presence, cognitive intimacy, affective intimacy, commitment, and mutuality (Register & Henley, 1992; Moss & Schwebel, 1993). With regard to Prager’s conceptualization of intimacy, 8 concepts are characteristics of intimate interaction (Prager, 1999). According to him, intimacy is a superordinate concept, which includes intimate interaction and intimate relationship.

Intimate interaction includes both intimate experience and behavior. These ideas define intimacy as a combination of dyadic behavior and individual experiences. Intimate experiences include both affective and cognitive components. Cognitive component considers the meanings that individuals impart to their experiences in interactions with significant others. Intimate experience requires emotional intensity; otherwise, interacting subjects will not perceive themselves as having experienced intimacy (Prager, 1995).

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More recent studies tried to find relationships between intimacy and love (Johnson, 2012) and the correlation between identity status and loving elements that contain intimacy (Mansoobi-Far, Krashkian, & Toloue, 2012). Intimate relationships can satisfy this demand for love and belonging in a variety of ways. First, intimacy is a way to avoid loneliness (Brown, 1995). A second more positive way of fulfilling needs is the good feeling of being intimate

with another person (Parger, 1999). A third way in which intimacy fulfills basic psychological needs is assuring of satisfaction in the future (Ainsworth & Bowlby, 1991). Finally, intimate relationship fulfills the other central domain in Maslow's hierarchy (1996) by providing a reliable base and giving everybody the validation, connection, and encouragement they need. Intimate relationships enhance

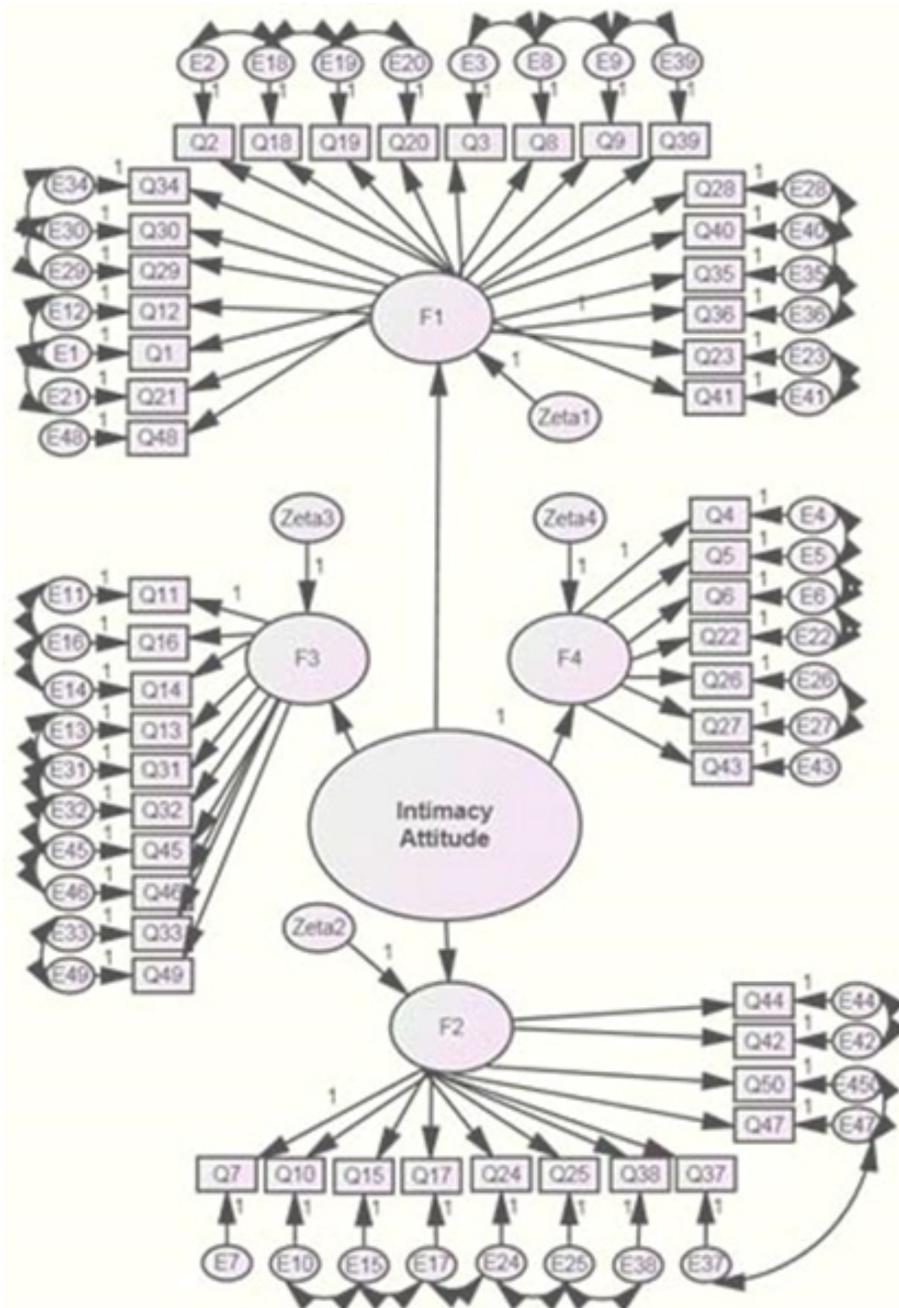


Figure 1. Confirmatory factor analysis.

Note: F1: Tendency to intimacy; F2: Escape intimacy; F3: Attractiveness; F4: Fear of intimacy.

Table 1. Component correlation matrix.

Component	1	2	3	4
1	1.000	0.078	0.218	0.160
2	0.078	1.000	-0.021	-0.155
3	0.218	-0.021	1.000	0.177
4	0.160	-0.155	0.177	1.000

Extraction Method: Principal Component Analysis.

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Rotation Method: Oblimin with Kaiser Normalization.

agentic such as the need for achievement, mastery, recognition, and self-esteem (Pargler, 1999).

Attitude is generally regarded as acquired behavioral dispositions. They are introduced in the analysis of social behavior as hypothetical constructs to account for various behaviors under seemingly similar circumstances. By definition, attitudes cannot be measured directly but have to be inferred from overt behavior (Rom, Harre, & Roger Lamb, 1983).

Although there is a considerable literature outlining benefits of an intimate relationship, there are few scales designed to measure this construct. Furthermore, most available scales measure the main features of an intimate interaction but not the intimacy attitude. Intimacy is a multidimensional concept which means different things to various people. This is especially true for individuals from different culture backgrounds, because different cultures do not view intimacy in the same way as in the Western world.

Western cultures experience high levels of intimacy in a romantic relationship which are associated with enhanced psychological, physical, and relational well-being (Dion & Dion, 1993), with reduced risk of divorce (Firestone & Firestone, 2004). It is unclear, however, whether intimacy has similar significance for personal and relational well-being in Asian cultures. Iran is a developing country that has different socialization processes for males and females. Child-rearing approaches in Iran are traditionally different from other western countries. Traditional cultural values and Islamic values affect individuals' life style and daily

activities. Therefore, this research aimed to answer the question that what are the components of intimacy attitude.

2. Methods

This study aimed to investigate intimacy attitude of university student and its pattern in comparison to Western society. In other words, whether the intimate attitude scale-revised (IAS-R) is a valid measure among Tehran students' society and what the main components of their intimacy attitude are.

Participants

The study participants were 550 students out of 700000 (that means 1 out of 1274) students of Tehran universities in 2011. This total sample was randomly selected from different universities, ages, and educational level by using a multistage random sampling method. The criteria of selection were as follows: (1) To be the student of one of Tehran universities; (2) To have a heterosexual relationship.

The total sample after screening the complete questionnaires consisted of 521 undergraduate and postgraduate students: 243 (46.6%) males; 278 (53.4%) females, aged 18 to 35 years (23.13±4.011). The participants were asked to complete the IAS-R and demographic questionnaires. A summary of the project were explained for each participant and then they were asked to complete the questionnaires, emphasizing on the fact that their personal information is kept confidential.

Table 2. Fit indexes for structural models.

	df	p	CFI	RMSEA	CMIN	GFI	RMR	NFI	IFI
Model 1	1173	0.000	0.500	0.066	3835	0.719	0.123	0.414	0.505
Model 2	1138	0.000	0.693	0.053	2774	0.811	0.106	0.576	0.698

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Table 3. Factor loading of each item.

Factor loading									
Factors					Factors				
Item	1	2	3	4	Item	1	2	3	4
1	0.401				26				-0.386
2	0.380				27				-0.512
3	0.406				28	0.419			
4				-0.557	29	0.398			
5				-0.582	30	0.423			
5				-0.644	31			0.527	
7		0.324			32			0.454	
8	0.453				33			0.596	
9	-0.347				34	0.354			
10		0.316			35	0.526			
11			0.337		36	0.438			
12	0.453				37		0.347		
13			-0.361		38		0.489		
14			0.320		39	0.301			
15		0.421			40	-0.482			
16			0.302		41	0.355			
17		0.623			42		0.370		
18	0.589				43				-0.415
19	0.537				44		0.329		
20	0.643				45			-0.577	
21	0.394				46			-0.532	
22				0.311	47		0.412		
23	0.412				48		0.326		
24		0.517			49			0.572	
25		0.570			50		0.531		

Measures

The Intimate Attitude Scale-Revised (IAS-R) (Amidon, Treadwell, & Kumar, 1983)

This form is the revised form of intimate attitude scale that was originally created by Edmund Amidon in 1978. The

IAS-R consists of 50 (26 of which negatively worded to prevent mental set and increasing the scale's accuracy) items to be rated on a 5-point scale (strongly disagree, mildly disagree, agree/disagree equally, mildly agree, and strongly agree). Two psychologists with good command of English translated the questionnaire, and then it was back-

Table 4. Intimacy score statistics.

	N	Range	Min	Max	Mean	SD	Variance	Z-score
Intimacy score	521	121	97	218	163.73	15.306	234.261	0

Table 5. Intimacy percentiles and Z-scores.

Percentiles	Intimacy score	Z-score
10	146.00	-1.1581082
20	151.00	-0.8314301
30	155.00	-0.5700877
40	160.00	-0.2434096
50	163.00	-0.0474028
60	167.00	0.2139396
70	171.00	0.4752821
80	176.60	0.8411615
90	183.00	1.2593094
100	218.00	3.5460557

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translated into English by two psychologists with PhD degree to ensure equivalence of meaning.

Structural validity of original IAS-R was examined by correlating the IAS-R with several intimacy scales such as intimacy behavior scale, Eysenck personality inventory, Rotter interpersonal trust, self-disclosure in social relationships, Sarason test anxiety scale, and alliance scale. It was concluded that the revised scale is a valid and reliable instrument (Amidon, Kumar, & Treadwell, 1983). To examine the content validity of the scale, it was reviewed and approved by a number of professional editors.

According to the test developers, the Cronbach α for the original intimacy scale was between 0.78 and 0.86 in 5 different groups and the test-retest correlation was 0.84 in 39 volunteered subjects of university students with 4 weeks interval. Because of wide cultural differences between the Iranian and Western cultures, exploratory factor analysis was used to determine the cultural effects. In both factor analyses, 50 items were subjected to principle components analysis, followed by varimax and oblimin rotation.

3. Results

Validity

Specifically, we tested and compared two different structural models. In the first model, it was assumed that all

items would load on 3 common and underlying factors of 'general intimacy', 'fear of rejection/loss of control in interpersonal intimacy', and 'sexual physical closeness' according to the scale developers. The confirmatory factor analysis confirmed that 50 items loaded on 3 underlying factors with a total explanation of 26% variance.

In the second model, according to the Kaiser-Meyer-Olkin (KMO) [0.82] criterion, the sample size was sufficient (KMO>0.90, $\alpha<0.01$), and 4 factors were derived based on Eigenvalues>1. The results from an exploratory factor analysis (i.e. principal component analysis, oblimin rotation) indicated that the 50 items were loaded on 4 underlying factors (factor loading>0.3) with a total explained variance of 31%. The first subscale as called 'tendency to intimacy' (Items: 1, 2, 3, 8, 9, 12, 18, 19, 20, 21, 23, 28, 29, 34, 35, 36, 39, 40, 41, and 48) because it includes items related to the need for intimacy, mutuality, self-disclosure, sympathy, and mutual dependence. Second subscale was named 'escape intimacy' (Items: 7, 10, 15, 17, 24, 25, 37, 38, 42, 44, 45, and 47) as it contained ignoring intimacy, intimacy abstinence, and distrust. The third subscale was called 'attractiveness' (Items: 11, 13, 14, 16, 31, 32, 33, 45, 46 and 49) because it includes 3 items regarding attractiveness, physical attractiveness, and sexual closeness. The last and forth subscale was called 'fear of intimacy' (Items: 4, 5, 6, 22, 26, 27, and 43) because there are some items in

Table 6. Univariate analysis of covariance.

Dependent variable	Sum of squares	df	Mean square	F	Sig.
Total Intimacy Score	1323.036	1	1323.036	5.672	0.018

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Table 7. Multivariate analysis of covariance.

Dependent variable	Sum of squares	df	Mean square	F	Sig.
F1	110.061	1	110.061	2.589	0.108
F2	156.167	1	156.167	2.396	0.122
F3	38.797	1	38.797	1.359	0.244
F4	50.340	1	50.340	3.172	0.075

the subscale regarding fear of losing control and fear of rejection (Table 1).

As it is shown in Table 2, the CFI, RMSEA, CIMN, GFI, RMR, NFI, and IFI are used as fit indexes (Bentler, 1995; Browne & Cudeck, 1993). As expected, both models had a rather good fit but the fitness of the 4-factor model was better than 3-factor model. Therefore, we used the 4-factor model for explanation (Figure 1). In addition, factor loading of each item for this model is demonstrated in Table 3.

Reliability

Test-retest reliability coefficients were significant ($P < 0.01$) and calculated as 0.83 for total scale. Thus, the scale has acceptable test-retest reliability. The Cronbach α of the scale was 0.84 and for all items it was between 0.831 and 0.839. It shows that the scale does not need any item omission or correction.

Scale norm

The average score of Iranian students in IAS-R was 163.73. More information regarding standardized scores and percentile scores are presented in Tables 4 and 5.

Age differences

To analyze the possible age differences, the subjects were divided to 2 groups based on their ages (group one, age < 25; group two, age > 25). Univariate and multivariate analysis of covariance were used to determine age differences. In multivariate analysis, the means of each factor and mean of total score were computed by controlling sex, marital status, and education degree.

There was a significant difference between the younger and older group regarding total intimacy scores in such a way that older subjects got higher scores than younger group (Table 8). Although in all subscales the older group got higher scores than younger group, there

Table 8. Intimacy score statistics in different ages.

Age groups		N	Range	Minimum	Maximum	Mean	SD	Variance
1	Intimacy Score	423	121	97	218	162.97	15.181	230.448
	Factor 1	423	46	30	76	57.32	6.613	43.731
	Factor 2	423	56	19	75	45.25	8.167	66.698
	Factor 3	423	36	22	58	38.48	5.290	27.980
	Factor 4	423	24	10	34	21.93	3.960	15.682
	Valid N (list wise)	423						
2	Intimacy Score	98	77	133	210	167.03	15.546	241.679
	Factor 1	98	32	40	72	58.50	6.101	37.222
	Factor 2	98	36	29	65	46.63	7.645	58.441
	Factor 3	98	29	22	51	39.17	5.572	31.052
	Factor 4	98	25	10	35	22.72	4.084	16.676
	Valid N (list wise)	98						

Table 9. Univariate analysis of covariance.

Dependent variable	Sum of squares	df	Mean square	F	Sig.
Total Intimacy Score	83.794	1	83.794	0.359	0.549

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Dependent variable	Sum of squares	df	Mean square	F	Sig.
F1	41.709	1	41.709	0.978	0.323
F2	102.589	1	102.589	1.571	0.211
F3	351.922	1	351.922	12.591	0.000
F4	3.691	1	3.691	0.231	0.631

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were no significant differences between two groups in subscales scores ($P>0.05$).

Sex differences

To find the possible effect of sex, univariate and multivariate analysis of covariance were used again, which showed a significant difference between female and male in the third intimacy factor score. The males got higher scores than females but there were no significant difference between two groups in total intimacy score and other subscales scores ($P>0.05$).

4. Discussion

The present study examined 4 components of intimacy attitude scale, adapted for use with a sample of Iranian students. It seems that the pattern of factor structure of the scale differs between Iranian and Western participants and this reflects cultural differences of the two societies.

Findings from this study support the view that the IAS-R is a highly reliable instrument with good construct validity. However, future research will have to test it in other social groups. In addition, our results suggest that through the process of aging, it tends toward more positive intimacy attitude and these changes were not allocated to one specific component. The find-

Table 11. Intimacy score statistics in different sexes.

Gender	N	Range	Minimum	Maximum	Mean	Std. Deviation	Variance	
Female	Intimacy score	277	121	97	218	163.05	15.922	253.505
	Factor 1	278	46	30	76	57.28	6.403	40.997
	Factor 2	277	47	19	66	45.95	8.286	68.660
	Factor 3	278	36	22	58	37.84	5.574	31.075
	Factor 4	278	24	10	34	22.00	4.103	16.838
	Valid N (listwise)	277						
Male	Intimacy score	243	91	123	214	164.52	14.591	212.903
	Factor 1	243	41	32	73	57.85	6.673	44.535
	Factor 2	243	53	22	75	45.02	7.831	61.318
	Factor 3	243	28	24	52	39.49	4.937	24.375
	Factor 4	243	21	14	35	22.17	3.867	14.951
	Valid N (listwise)	277	121	97	218	163.05	15.922	253.505

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ings are compatible with the results of Johanson (2012) that indicates intimacy varies with passing time. This finding is in line with Erikson theory (1982). Erikson considered love as the basic strength of youth, which is resulted from the crisis of intimacy against isolation. He defined love as a mature attachment and sacrifice that takes over basic differences between men and women. Evidence of various studies showed that 3 elements of intimacy, commitment, and passion could be related to the person's identity status. Results of O'Conner study (1992) confirmed that qualities of loving relationships are related to identity status.

Findings of Fartash and Hejazi (2006) showed that informative identity style could significantly predict 3 parameters of intimacy, commitment, and trust, whereas the normative identity and diffused/avoidant identity styles cannot predict the above parameters. It appears that 4 components of intimacy attitude gradually and over time change by achieving the identity in undergraduate students.

As it was expected, physical attractiveness and sexual closeness are factors that make men feel better regarding intimacy but it has less effect in women's positive intimacy attitudes. Gender is an important social factor that affects adolescents' lives in many ways. Stereotyped beliefs may lead to sexism, including prejudiced attitudes and discriminatory behaviors. Gender-related variations during adolescence occur in dating relationships and friendship intimacy (Daniels & Leaper, 2011). Along with what Wiederman and Allgeier (1993) said, men place more value on sexual activity within dating relationships and women place more value on emotional intimacy. Of course, separate research regarding this issue would be favorable.

The present research had some limitations. First, the questionnaires were self-reported. The IAS-R scale was designed to assess intimacy attitude based on individual behavior. It is one of the major limitations of the scale because it assess attitude according the behaviors. Moreover, because all sample subjects were university students, cautious must be taken in generalization of the results.

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