

# FACTOR ANALYSIS OF SELF-REPORT STATEMENTS OF LOVE RELATIONSHIPS

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In an earlier paper (1) a self-report approach to studying love was presented. 200 subjects described their relationships with people they loved. These statements, 383 in all, were gathered into a scale of eight categories: material evidence of love (material support, performing chores, etc.); non-material evidence of love (encouragement, advice, etc.); shared activities (games, church, shows, etc.); similarity of outlook on life, values, etc.; self-disclosure (disclosing intimate facts about yourself); verbal expression of feelings; feelings that were not verbally expressed; and physical expression of love.<sup>1</sup>

## METHOD

592 subjects, aged 17 to 42, (mean age = 21.56), 286 male and 306 female, were asked to complete the love scale, for their relationships with five persons: mother, father, closest sibling, closest friend of the same sex, and closest friend of the opposite sex or spouse if they were married. They were to complete the scale for the relationship as it existed at the present time, and only if they felt they loved the person in question. Scales were completed for the following relationships: mother, 516; father, 309; closest sibling, 294, closest friend of the same sex, 263; and spouse or closest friend of the opposite sex, 248; 1630 in all.

Of the original 383 scale items, those items were dropped that over 75% of the subjects marked not applicable to any of their love relationships in the first study. Thus only 336 items were used in the present study. Since this still would require a matrix too large for any available computer to handle, the scale was split into three by taking every third item for each scale, beginning with items 1, 2, and 3, respectively. Thus, there were three scales, of 112 items each.<sup>2</sup>

Each of these scales was factor analyzed by the principal-components method. The obtained factors were rotated by the bi-quartimin method, the rotations performed twice for each set of obtained factors. Items were selected for inclusion in a factor when they loaded .80 or higher on a factor after rotation and after the row vectors had been normalized.

## RESULTS

Ten factors were identified. Seven of these were found in all three of the factor analyses; two, in only two; and one factor, in only one of the factor analyses. They are listed below with examples of items of which they are composed.

The seven factors that occurred in all three factor analyses might be considered stable, or basic factors. They are:

1. *Verbal expression of feelings:* You have told them you trust them completely. You have told them you feel a great fondness or love for them. You have told them you have a warm, happy feeling when you are with them.

<sup>1</sup>A copy of the scale may be obtained by writing to the principal author.

<sup>2</sup>The authors are indebted to Dr. B. J. Winer for suggesting the statistical approach.

ii. *Self-disclosure*: They have told you they plan some major decision in the near future—a new job, get married, etc. They have told you the chief pressures and strains in their daily work. You have told them your strongest ambition at the present time.

iii. *Willingness to tolerate the less pleasant aspects of the loved person*: They have shown love by a willingness to change in order to please you. You will go places or do things with them, even though these activities don't particularly appeal to you. They have told you what they feel guiltiest about, or most ashamed of in their past.

iv. *Non-material evidence of love* (support and encouragement): They show an interest in you and your activities. You are respectful and considerate of their opinions. They gave you encouragement when you were discouraged.

v. *Unexpressed feelings*: You feel fortunate to have such a relationship with them, but have not told them this. You hope they are happy, but have not told them this. You are concerned about their health, but have not told them this.

vi. *Material evidence of love* (money and other gifts): They have performed chores for you—washing clothes, typing papers, etc. You have helped them with tasks such as homework, household chores, etc. They have directly protected or saved you from bodily harm.

vii. *Physical expression of love*: Expression of love through hugging or kissing. Expression of love through necking and petting. Expression of mutual love through sexual relations.

Six of these seven factors were among our original scale categories. The one that is new is Factor iii, willingness to tolerate and accept the loved person in spite of the demands he may make. This factor was brought out even more clearly by the rotation procedures.

The two factors which were found in only two of the analyses are:

viii. *Considerateness*: They notice small things about you, such as a new haircut or hair-do, new clothes, etc. You remember important events in their life such as birthdays, anniversaries, etc. You avoid criticizing them.

ix. *"Parent factor"* (discipline, material support and instruction): They taught you skills such as how to drive a car, sew, etc. They provided money or support for your education. They have disciplined you.

The "parent factor" is composed of such items from the original "material evidence of love" category that are only characteristic behaviors of parents. Factor viii is new. It is composed of items of small kindnesses and attentiveness—the sorts of things emphasized in the candy and perfume ads.

The last factor was found in only one factor analysis:

x. *Doing things together*: Working together on projects—club activities, gardening, etc. Attending or watching sports events together—football, basketball, etc. Attending church together.

For whatever it is worth, this would suggest that "togetherness" is not of great importance in love relationships, at least as people report them verbally.

To sum up the relationship between the eight original categories and the ten factors obtained in the present study: Seven of the original categories are found again among the factors. Only one category remained unsubstantiated, "similarity of outlook on life, values, etc." The three factors that had not been anticipated among the categories are: iii. Tolerance; viii. Considerateness; and ix. "Parent factor."

The percentage of the total variance of the scale which is accounted for by Factors i to v, in each of the three factor analyses that were performed, is shown in Table I. Factors vi to x are not listed since none contributed as much as 3% to the total variance in any of the three analyses.

TABLE I. PERCENTAGES OF TOTAL VARIANCE OF THE LOVE SCALE ACCOUNTED FOR BY FACTORS I TO V IN THE THREE FACTOR ANALYSES THAT WERE PERFORMED

Factor analysis	Factor				
	I	II	III	IV	V
1	23.43	11.45	6.47	5.76	3.77
2	22.61	11.25	6.45	4.26	5.47
3	11.26	22.94	6.23	3.95	5.47

#### SUMMARY

A previously described 336 item inventory on love relationships was completed by 592 subjects to describe their love relationships with their mothers, fathers, closest siblings, closest friends of the same sex and closest friends of the opposite sex or spouses. Inventories on 1630 love relationships were completed. These data were factor analyzed. Ten factors were extracted and are listed in order of their contribution to the total variance: verbal expression of feelings; self-disclosure; willingness to tolerate the less pleasant aspects of the loved person; non-material evidence of love; unexpressed feelings; material evidence of love; physical expression of love; considerateness; "parent factor"; and doing things together.

#### REFERENCE

1. SWENSEN, C. H. Love: a self-report analysis with college students. *J. Indiv. Psychol.*, 1961, 17, 167-171.