

## INTERNATIONAL ARTICLE

# How Do Vocational and Relationship Stressors and Identity Formation Affect Adolescent Mental Health?

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**Purpose:** This article examines the effects of stressors in both the vocational and relationship career of youngsters in the formation of their identity; the effects of identity formation on adolescent mental health; the influence of career stressors on mental health, directly or via identity, and differences in these effects on boys and girls.

**Methods:** Data were used from the Dutch national panel study, Utrecht Study of Adolescent Development, a study of developmental processes as they occur in the life course of young people during the 1990s. Using LISREL, we tested hypotheses on two waves of a sample of 1222 respondents between 15 and 24 years of age in Wave 1 (1991).

**Results:** The correlation between relationship stressors and relationship identity can be neglected, while vocational stressors lead to a less achieved vocational identity, particularly in boys. Occupational and relationship identity have similar effects on mental health (i.e., the more achieved the identity, the better the person's mental health). Vocational and especially relationship stressors lead to poorer mental health, but did not affect the mental health of boys and girls differently. The same goes for the influence of relationship and vocational identity formation on mental health.

**Conclusions:** Career stressors, especially stressors in the relationship domain, appear to have significant long-term effects on adolescent mental health. Vocational and relationship identity formation are also significant predictors for adolescent mental health. © Society for Adolescent Medicine, 1999

## KEY WORDS:

Adolescents  
Vocational stressors  
Relationship stressors  
Identity  
Gender differences  
Mental health  
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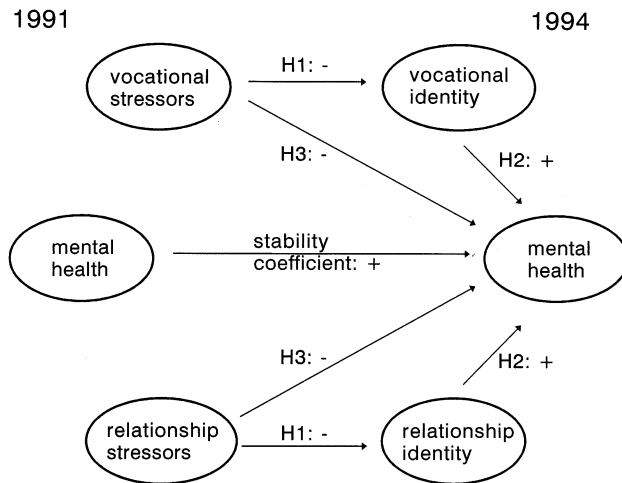
Is it more difficult for young people who have experienced major negative life stressors to get along in today's society? We deal with some of the stressors in vocational and relationship careers, identity formation, and their consequences for the mental health of youngsters aged 15-24 years. Most studies concerning adolescent mental health examine relationships with either identity variables (1) or career variables. We focus on the joint effects of career stressors and identity variables on mental health.

It is relevant to ask how stressors in the vocational and relationship domains may affect adolescents' identity formation. Marcia's identity status model (2-4) is considered the most important elaboration of Erikson's view on identity formation (5). Marcia considered development of identity to take place in a number of domains, including the vocational and relationship domains. Two dimensions are important for the development of identity in a certain domain: exploration of the alternatives and commitment to one of them. Exploration refers to the process of identity formation and indicates whether the adolescent is engaged in actively exploring his or her possible commitments. Commitment refers to the extent to which one has made a clear choice out of the possible alternatives in a domain. It generally

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**Figure 1.** The hypothesized relations between concepts. + or - indicates a positive or negative hypothesized relationship.

holds that the more exploration or commitment adolescents display, the higher is their identity status. Our assumption is that stressors in the vocational and relationship domain disturb the process of identity formation. In this study, we aimed to gain insight into the correlations between vocational and relationship stressors and adolescent mental health, and the possible influence of identity formation on mental health. We formulated the following research questions: (a) What are the effects of stressors in the vocational and relationship careers on the identity formation of youngsters, and what are the combined effects on their mental health? (b) Are these effects different for boys and girls?

A general assumption in psychology is that people want to view themselves positively (6). When youngsters are confronted with serious problems in their vocational or relationship careers, they may think they have failed in some way. This threatens the positive view of self, which implies that people will avoid investing time and effort in that domain. Therefore, the more a young person has been confronted with stressors in a certain domain, the stronger the negative influence is on exploration and commitment, and thus on identity formation (7). These observations lead to Hypothesis 1: Vocational and relationship stressors have a negative effect on vocational and relationship identity formation, respectively (Figure 1).

Several studies have been published on identity and the different indicators of psychological well-being (8-17). Analysis of these studies (18) showed that adolescents in the highest identity status (e.g.,

identity achievement) have the highest level of psychological well-being. Thus, we expect a more achieved vocational or relationship identity to have a positive effect on mental health (Hypothesis 2).

The transition to a vocational career and entering into a satisfying intimate relationship are two important developmental tasks in the lives of youngsters. Youth unemployment remains a huge problem in modern society, and it is also a stressor for a youngster as an individual. Because an adequate work environment provides opportunities for learning, initiative, social contact and self-reliance (19,20) unemployment is expected to have a negative impact on mental health. This implies Hypothesis 3a: The more youngsters have been confronted with vocational stressors, the poorer is their mental health.

All youngsters are confronted with the modernization and individualization of society. This means greater emphasis on being responsible for one's own decisions, especially in the area of personal relationships. Young people in The Netherlands start their first courtship around the age of 16 years on average. The mean age of the first coitus has dropped to 17 years (21). Nowadays, the dominant pattern in the relationship career is to live together with a boyfriend or girlfriend, mostly followed by marriage after a few years. About 50% of these initial cohabitational relationships end in separation. Also, conflicts in the relationship career might affect the mental health of youngsters.

We expect an accumulation of serious problems in the vocational and relationship careers will lead to psychological tension that will have a negative effect on mental health. This leads to Hypothesis 3b: The more youngsters have been confronted with relationship stressors, the poorer is their mental health.

From a traditional point of view, boys are more concerned with a paid vocational career than girls. As a consequence of their specific gender identity, boys on average are more sensitive to factors threatening their vocational situation (education or work). Boys will therefore be more affected by stressors in their vocational careers than girls. Although this difference between boys and girls may have decreased, recent studies still show that boys are more geared toward work and having a paying job (22,23). For this reason boys' experiences of being unemployed could have more of an effect on their mental health than girls.

Boys have an identity that is based, more or less equally, on relations and education or vocation (24). Since girls in general are more concerned with social relationships than boys (23), stressors in the relation-

**Table 1.** Means and Standard Deviations of Central Measures of Boys (534) and Girls (688) ( $n = 1222$ )

	Mean Boys	Mean Girls	SD
Age Wave 1 (15–25)	19.2	19.3	3.08
Mental health Wave 1*	26.4	25.3	3.37
Mental health Wave 2*	26.0	25.1	3.42
Relationship stressors	4.67	4.68	1.21
Vocational stressors	4.61	4.66	1.18
Relationship identity*	3.75	3.98	0.68
Vocational identity*	3.53	3.63	0.63

\*  $p < .05$ .

ship domain may have a greater impact on the mental health of girls than boys. This leads to the follow hypotheses: (4) Vocational stressors have a stronger negative effect on the mental health of boys than girls. (5) Relationship stressors have a stronger negative effect on the mental health of girls than boys. (6) The positive correlation between vocational identity and mental health is stronger for boys than for girls. and (7) The positive correlation between relationship identity and mental health is stronger for girls than for boys.

## Methods

### Subjects

The subjects for this study are participating in a longitudinal project, the Utrecht Study of Adolescent Development (24). Two waves of this project were available, held in 1991 and 1994. The subjects are a national sample of Dutch adolescents aged 12–24 years (Wave 1, 1991). The response was 74%. Control calculations indicate that the random selection of young people deviates slightly from information on age, sex, education, religion, etc., known about young people based on other sources (Central Bureau of Statistics). There is one area of deviation: immigrant youngsters are hardly represented. This must be taken in account in interpreting the results.

The youngsters were interviewed at home and also filled in an extensive questionnaire that they later returned. For this study, we used the data of the youngsters 15–24 years of age (in 1991). Subjects with missing values were discarded, resulting in a sample of 1222 subjects (Table 1).

### Statistical Analyses

We applied a linear structural relations (LISREL) model (25) to the correlations among the concepts

introduced above. Most of the latent constructs have two or three indicator variables. The relationship and vocational identity, assessed by means of scales, have a single indicator variable. Examples of the indicators or scales are given below, and their Cronbach alpha, when applicable. We used mean scale scores where scales were used. We computed correlations between all the variables as input for the LISREL analysis.

In large samples, the chi-square statistic tends to be large when the model does not hold exactly (25). Therefore, three additional fit statistics not biased by this factor will be reported below: the goodness of fit index (GFI), which indicates how much better the model fits compared to no model at all; the goodness of fit index adjusted for degrees of freedom (AGFI), and the root mean square residual (RMR), which is the average of the square of the residuals, and hence indicates how large the departures are when the observed and predicted correlation matrices are compared). Anderson and Gerbing (32) found that values above .90 for the GFI, above .80 for the AGFI, and below .05 for the RMR are indicative of an acceptable fit.

## Measures

### Adolescent Mental Health

The latent mental health variables were measured in both waves by means of (a) the Cantril ladder (26), which measures the feeling of general psychological health and happiness. The respondents were asked to indicate on a 10-point scale how they generally felt (1 = "very bad," 10 = "very well"); and (b) a shortened version of the General Health Questionnaire (GHQ) (27,28). This version of the GHQ consists of 10 items measuring both feelings of stress and depression ( $\alpha = .92$  for both waves). For example: "In the last 4 weeks, did you feel that you constantly were under a lot of pressure?" "In the last 4 weeks, did you feel depressed and sad?" Possible answers were: 4 = "not at all," 3 = "not more than usual," 2 = "more than usual," and 1 = "much more than usual." The scores were converted to a 10-point scale, with 0 = "bad" (i.e., much stress) and 10 = "good" (i.e., no stress at all).

### Stressors

Two domains of experiences were distinguished, relationship and vocational. Two stressors were included in the vocational domain: (a) being unem-

ployed or disabled, and (b) having serious financial problems. In the relationship domain, we included two important relationship stressors: (a) breaking up after courtship, and (b) obtaining a divorce. These four variables were assessed in the first and second waves. All parameters could take one of two values: 0 = "not applicable," or 1 = "applicable."

### Identity

The Utrecht Groningen Identity Scale (U-GIDS), developed by Meeus (18,29) on the basis of the GIDS (30), measures exploration and commitment in the areas of work and relationships. In the U-GIDS, slightly adapted items of the work exploration questions (five items,  $\alpha = .80$ ) and work or vocational commitment questions (eight items,  $\alpha = .91$ ) are used for, respectively, relationship exploration ( $\alpha = .78$ ) and relationship commitment questions ( $\alpha = .91$ ). The items are scored on a 5-point scale (1 = "agrees not at all," 5 = "agrees exactly"). Commitment is measured here as the extent to which adolescents feel dedicated to and derive self-confidence and an optimistic outlook on the future from their work and relationships. An example of work commitment is: "My work gives me security in life." The corresponding relationship commitment item is: "My best friend gives me security in life." Exploration refers to the process of identity formation and indicates how much an adolescent is actively engaged in investigating relationships and work. An example of work exploration is: "I take a lot of trouble to get new information about my work." The corresponding relationship exploration version is: "I take a lot of trouble to get new information about my best friend."

Initially, we wanted to use both exploration and commitment as indicators for identity. However, preliminary analyses showed very low correlations of the exploration variables with other variables, resulting in very low indicator loadings in the LISREL analysis. We therefore decided to use only the commitment variables as indicators for identity. The identity variables were assessed in the second wave.

### Results

The hypothesized model of Figure 1 was computed. The fit statistics for this initial structural equation model are  $\chi^2(27) = 288.46$ ;  $p < .05$ . For the initial structural equation model, GFI = .95, AGFI =

.90, and RMR = .051. Although these fit statistics are reasonably satisfactory, the model might be improved by adding some correlated residuals. As Jöreskog and Sörbom (25) pointed out, in longitudinal studies there is a tendency for measurement errors to correlate over time, owing to retest effects. In the present study, this holds for the mental health indicators (the standardized coefficients were .07 for the Cantril ladder and .19 for the GHQ). A similar enhancement of response set is caused by using similar items in the vocational and relationship identity domains. Then, differences between respondents in the interpretation of items in one domain will probably also occur in the other domain on similar items. For that reason, a correlated residual was also modeled between the indicator variables of the relationship commitment and the vocational commitment (the standardized coefficient was .19). The addition of the correlated residuals increased the fit of the initial model significantly,  $\chi^2(3) = 154.56$ ;  $p < .05$  (Figure 2).

Fit statistics of the final model are  $\chi^2(24) = 133.90$ ;  $p < .05$ ; GFI = .98; AGFI = .94; RMR = .04. The significant  $\chi^2$  indicates a poor fit, but with large sample sizes one has to interpret this statistic with care (33) as low, unmodeled associations already lead to rejection of the LISREL model. As predicted in Hypothesis 1, the negative correlations between vocational and relationship stressors on the one hand, and the formation of vocational and relationship identity, respectively, on the other show up in the results. However, relationship stressors have only a small effect on the relationship identity. Strictly speaking, Hypothesis 1 is confirmed only as far as vocational stressors are concerned. Hypothesis 2 is corroborated. We found, as expected, positive correlations between a more achieved vocational and relationship identity and better mental health. As expected in Hypothesis 3, vocational as well as relationship stressors have a negative effect on mental health. The direct effect of relationship stressors ( $-.17$ ) is stronger than the direct effect of vocational stressors ( $-.11$ ). The indirect effect of vocational stressors on adolescent mental health via vocational identity is  $-.26 \times .23 = -.06$ . Thus, the total effect is  $-.17$ . However, the indirect effect of relationship stressors on mental health is negligible (namely,  $-.07 \times .20 = -.01$ ) (Figure 3).

Hypotheses 4-7 concern gender differences. To test these hypotheses, we used the same LISREL model as described above, but with separate data for boys and girls. Both models showed a comparable fit to the model for the whole sample. For boys, the fit



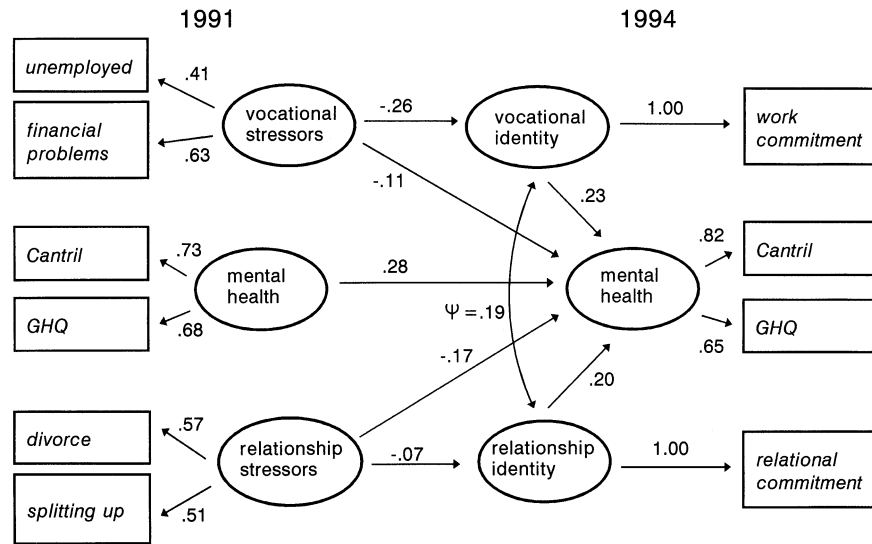


Figure 2. The standardized coefficients of the LISREL model. Latent variables are shown in ellipses and observed variables are shown in rectangles. Only significant coefficients ( $p < .05$ ) are depicted.

statistics are  $\chi^2(24) = 52.65; p < .05$ ; GFI = .98; AGFI = .96; RMR = .04; and for girls,  $\chi^2(24) = 102.76; p < .05$ ; GFI = .97; AGFI = .94; RMR = .05. The hypotheses were tested by comparing the standardized estimates in

$$\frac{z_1 - z_2}{\sqrt{\frac{1}{n_1 - 3} + \frac{1}{n_2 - 3}}}$$

in which  $z_1$  and  $z_2$  are the Fisher Z transformed standardized estimates and  $n_1$  and  $n_2$  are the numbers of boys and girls (34).

Hypotheses 4–7 were all rejected. However, an unpredicted difference was found: The negative relation between vocational stressors and vocational identity was stronger for boys (–.35) than for girls (–.18;  $p < .05$ ).

We did not find that stressors in the vocational career have a stronger negative effect on the mental health for boys than for girls (coefficients for boys, –.19, and for girls, –.14), so we have to reject Hypothesis 4. Hypothesis 5 was also rejected: Stressors in the relationship career do not seem to have a stronger negative effect on the mental health of girls than of boys (coefficients, –.14 for boys and –.12 for girls).

Hypothesis 6 reads that a stagnation in the vocational identity formation would have a stronger negative effect on the mental health of boys than girls. The coefficients were .24 for boys as well as for girls. Thus, we have to reject Hypothesis 6. Hypothesis 7 expected that a stagnation in the relationship identity formation would have a stronger negative effect on the mental health of girls than boys. The coefficients are .20 and .23 for girls and boys, respectively. The difference between these coefficients is also not significant. Hypothesis 7 was not corroborated.

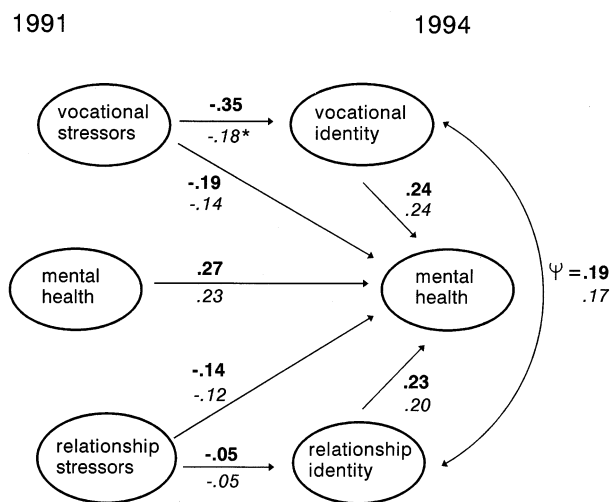


Figure 3. The standardized coefficients of the LISREL model, given separately for boys (bold) and girls (italic). Only significant coefficients ( $p < .05$ ) are depicted. \*Difference between boys and girls is significant.

## Discussion

In this study, we developed a model to gain more insight into the effects of vocational and relationship stressors on identity formation and their combined effects on adolescent mental health. We tested hypotheses derived from this model, only some of which were confirmed. The correlation between relationship stressors and relationship identity is negligible, while vocational stressors lead to a less achieved vocational identity. Clearly, youngsters perceive the chances of a new relationship to be greater than the chances of a new job. As a consequence, relationship stressors seem to form a smaller risk to the relationship identity formation than vocational stressors to the formation of an vocational identity. On the other hand, vocational and relationship identity have similar effects on mental health (i.e., the more achieved the identities are, the better is the youngster's mental health). Although vocational and relationship stressors both lead to poorer mental health, relationship stressors pose a greater threat to mental health.

Gender does not seem to be an important factor in this respect. There was no difference measured in the effect of vocational and relationship stressors on the mental health of boys and girls. Nor were any differences found between boys and girls as to the effect of stagnation in the vocational or relationship identity formation, respectively, on their mental health.

However, an important result (not predicted in a hypothesis) is the stronger negative effect of vocational stressors on vocational identity formation for boys. Boys consider a paying job more important (22) and, as a consequence, the experience of being unemployed affects boys more seriously in the formation of their vocational identity than girls.

The central question in this article concerns the long-term effects of stressors in the vocational and relationship careers on the identity formation of adolescents, on the one hand, and their combined effect on adolescent mental health, on the other. Our results demonstrate that vocational and relationship identity are relevant predictors for adolescent mental health. Moreover, career stressors appear to have substantial long-term effects on adolescent mental health. The conclusion can be drawn that the indirect influence of career stressors, i.e., via identity, is negligible.

Finally, the differences predicted between boys and girls were mostly not confirmed. Clearly, as far as the variables that we have dealt with in this article

are concerned, boys and girls are becoming more and more comparable. This is probably owing to the ongoing process of women's emancipation in today's society. In The Netherlands, the educational level of young women is currently more or less equal to that of young men. Participation of women in the paying labor force has also increased, but there still is a substantial difference between men and women. In 1994, 68% of the women had a paying job, and 95% of the men. These percentages were, respectively, 48% and 95% in 1984 (35).

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