

Unemployment and psychological distress among graduates: A longitudinal study

Wilmar B. Schaufeli* and Nico W. VanYperen

Department of Psychology University of Nijmegen P O Box 9104, 6500 HE Nijmegen, The Netherlands

A longitudinal study which addresses the relationship between unemployment and psychological distress in Dutch technical college graduates is presented

Two samples were studied sample 1 ($N = 635$) consisted of students leaving technical college and sample 2 ($N = 487$) consisted of technical college graduates who had been unemployed for more than one year

In contrast to the results of many recent published studies, unemployment was only found to be associated with psychological distress among those unemployed for more than two years Males and females were not found to react differently to unemployment Less psychologically distressed graduates were more likely to become employed than more distressed graduates, and the mean level of psychological distress decreased significantly over time for both employed and unemployed technical graduates Individual vulnerability explained about twice as much variance in psychological distress of these respondents compared with changes in their employment status Furthermore, this study indicates the importance of taking into account group-specific aspects (i.e. level of education) as well as the (Dutch) structural and cultural context in understanding the consequences of unemployment

In the 1930s, Eisenberg & Lazarsfeld (1938) reviewed 112 studies on the psychological effects of unemployment Although most of these early studies do not meet modern methodological and statistical standards, their basic findings have more or less been confirmed in recent studies These modern studies reveal that, among other things: (1) unemployment is associated with mental symptoms (Banks & Jackson, 1982; Bolton & Oatley, 1987; Feather, 1990; Fryer, 1985; Hepworth, 1980; Kessler, House & Turner, 1987; Kirchler, 1985; Lethinen, 1984; Melville, Hope, Bennison & Barraclough, 1985; Schwefel, 1986; Warr, 1984; Warr, Jackson & Banks, 1988), (2) mental health improves after reemployment (Jackson, Stafford, Banks & Warr, 1983; Kasl, Gore & Cobb, 1975; Lahelma, 1989; Payne & Jones, 1987; Warr & Jackson, 1985), (3) no linear relationship exists between the length of the unemployment period and the level of mental health (Frohlich, 1983; Iversen & Sabroe, 1988; Payne, 1987; Rowley & Feather, 1987; Stokes & Cochrane, 1984), which may be explained by reaching a *plateau* of ill-health (Lahelma, 1989; Payne, 1987; Warr & Jackson, 1985).

It should be noted that the just mentioned studies predominantly investigate unemployment in unqualified males, which restricts their generalizability (Warr, 1987; Feather, 1990) In the present study our focus is on well-educated and highly qualified male and female unemployed who graduated from technical colleges

* Requests for reprints

On the one hand it can be argued that well-educated individuals may experience more severe psychological consequences because of the sharper decline in social status when they lose their jobs (*'the higher the climb, the harder the fall'*; Bakke, 1940, p. 323). As Kaufman (1982) noted, graduates are more likely than those in other occupations to obtain their identity or self-concept from their work. Indeed, several studies suggest that unemployment has a negative impact on mental health of the well educated (Feather & Bond, 1983; Fineman, 1979, 1983; Goodchilds & Smith, 1963; Kaufman, 1982; Ostel & Divers, 1987; Shamir, 1986). On the other hand, graduates are supposed to cope well since they have many resources at their disposal (cf. Feather & Bond, 1983; Warr, 1984). For instance, well-educated individuals (1) exhibit proactive behaviour when they become unemployed (Fryer & Payne, 1984), (2) generally show high levels of self-esteem (Pukey, 1970), and (3) have options of accepting alternative jobs (Kjos, 1988). Indeed, some studies suggest that the well educated cope effectively with unemployment (Estes & Wilensky, 1978, Fryer & Payne, 1986; Hartley, 1980; Hepworth, 1980). Besides, the negative effects of unemployment upon mental health are generally found to be more severe among unqualified (male) samples compared to more qualified samples (cf. Banks & Jackson, 1982, Jackson *et al.*, 1983; Schaufeli, *in press*; Warr, 1984).

In conclusion, two rival hypotheses exist about the impact of unemployment on well-educated individuals: (1) their mental health is affected because of status inconsistency, (2) their mental health is not threatened because they can draw upon considerable resources. Both hypotheses can claim some weak empirical evidence. However, most studies suffer from inadequacies like a cross-sectional design where a longitudinal design is needed (Feather & Bond, 1983, Hepworth, 1980; Kaufman, 1982, Estes & Wilensky, 1978), while others used highly specific samples, such as managers attending a course (Fineman, 1983, Hartley, 1980), or included a small number of unemployed respondents (Feather & Bond, 1983; Shamir, 1986), or not validated self-constructed inventories (Estes & Wilensky, 1978, Kaufman, 1982).

Not only is the level of education likely to moderate the unemployment experience, but so is the person's work experience, or lack of it. For instance, it can be argued that recent graduates will suffer less from unemployment than their counterparts who have been employed before. Obviously, recent graduates have not yet developed an occupational identity, they may feel less economic pressure, and they have experienced extended leisure time (Hayes & Nutman, 1981). In contrast, finding a job might have a greater psychological impact upon recent graduates than not finding employment, because college leavers who obtain a job experience a significant change in status (Bachman & O'Malley, 1977, Winefield & Tiggemann, 1989). Indeed, several studies suggest that among school-leavers paid employment *enhances* mental health, whereas less evidence is available that unemployment leads to debilitation (Banks & Jackson, 1982, Donovan & Oddy, 1982, Gurney, 1980, Patton & Noller, 1984, Tiggemann & Winefield, 1980, 1984).

Furthermore, gender differences may play a moderating role with regard to the experience of being unemployed. Unemployed females have been found to be less affected by unemployment in comparison to males, since even today their sex role traditionally leaves open the possibility of becoming a full-time housewife (Lahelma, 1989, Stokes & Cochrane, 1984, VanYperen & Buunk, 1991; Warr & Parry, 1982, Winefield & Tiggemann, 1985). In the present study, differences between recent graduates and long-term unemployed graduates, as well as differences between males and females are taken

into account. Unemployment research has been criticized because the social and cultural context has been largely neglected (Gurney & Taylor, 1981). Therefore, it seems important to pay attention to some typical aspects of unemployment in the Netherlands. First, in comparison to other countries, Dutch unemployment benefits tended to be relatively high, at least in the period when our study was conducted. Unemployed individuals received 80 per cent of their gross wages during the first six months, and 75 per cent in the next year. After 1½ years social assistance set in and from that time the amount of financial aid was determined by personal circumstances. Unemployed college leavers received a fixed amount of social assistance which in most cases even exceeded their scholarships. However, recently, unemployment allowances and social assistance have been reduced drastically. Second, the Dutch social security system tends to select out the less (mentally) healthy potentially unemployed, labelling them as disabled (Knepper, 1991). This selection results in a relatively healthy unemployed population compared to other countries. For instance, Smith (1981) showed that in Great Britain 29 per cent of the unemployed had some limiting disability, whereas only 9 per cent were registered disabled. It is very likely that in the Netherlands this 20 per cent of disabled unemployed who were not registered as such, would have been reckoned as disabled instead of unemployed. Finally, in recent years a cultural change has taken place in the Netherlands, resulting in what has been called a 'normalization' of unemployment, i.e. being unemployed is becoming more and more socially acceptable (Maassen & De Goede, 1987). Taking these structural and cultural factors into consideration, it can be speculated that the Dutch unemployed are less likely to report psychological distress than their counterparts in most other countries, because of (1) less financial strain, (2) the filtering out the less healthy from the unemployed population, and (3) a tendency towards cultural normalization.

An additional unresolved fundamental question dealt with in this study is how the causal relationship between unemployment and psychological distress must be interpreted. It is generally confirmed that unemployment produces psychological distress (Bolton & Oatley, 1987; Feather, 1990; Kirchler, 1985; Linn, Sandifer & Stein, 1985; Warr, Jackson & Banks, 1988). On the other hand, some researchers suggest that initially poor mental health may interfere with the ability and the desire to find work (Dooley, Catalano & Brownell, 1986; Kasl, 1982). To achieve more clarity about this issue, in the present longitudinal study it is tested whether negative changes in employment status will result in psychological distress.

Method

Two samples are studied that include exclusively respondents who graduated from technical colleges.¹ In Sample 1, the effects of unemployment and employment on the mental health of recent graduates was stud-

¹ The Dutch system of higher education differs considerably from that in other countries. The most characteristic feature is the distinction between two types of educational institutions, universities and technical colleges (i.e. schools for higher professional education). The difference between these institutions is historical rather than systematic. In principle, at the universities students are prepared for theoretical work in the pure sciences and arts, whereas in technical colleges they are trained in the applied arts and sciences (e.g. engineering, administration, health, education, welfare and agriculture). Rather inconsistently the training of some other professionals such as physicians, dentists, lawyers and psychologists, takes place at the universities. Both educational institutions offer a four-year programme, after which the students obtain a degree or diploma. After their graduation from a technical college students may continue their education on a more theoretical level at the university for another four years. Basically, all graduates are admissible to PhD programmes. However, only university graduates avail themselves actually of this opportunity. In the Netherlands approximately 200 000 students are enrolled in technical colleges and 150 000 in universities.

ied *prospectively*, up to a period of two years after graduation. In Sample 2, however, the consequences of long-term unemployment, and reemployment were investigated among graduates.

Sample 1

A total of 1524 students received a questionnaire in 1986. All of them would graduate in the next six months. The T_0 -response rate was 42 per cent ($N = 635$, 63 per cent men, 37 per cent women). The mean age was 22.8 years (SD 2.2, range 21–35 years). The sample appeared to be representative for the population of Dutch graduates from technical colleges with respect to gender and type of education (Schaufeli, 1988, pp. 105–106). Four follow-ups were conducted after graduation at six month intervals (T_1 to T_4). Drop-out rates ranged from 7 to 20 per cent. In total, 411 respondents filled out all five questionnaires. They did not differ significantly from the non-respondents with respect to age ($t = 1.76$, n.s.), sex ($\chi^2 = 2.06$, n.s.), type of training ($\chi^2 = 7.4$, n.s.), and psychological distress ($t = 85$, n.s.). Twenty-two respondents were excluded from the analyses due to missing data, leaving a final sample of 389 respondents. Additionally, a random subsample of 25 unemployed graduates were interviewed in depth four times between T_1 and T_2 with an interval of one month. In these semi-structured interviews qualitative data have been gathered about their appraisal and way of coping with unemployment.

Sample 2

In 1987, a virtually identical questionnaire as used in Sample 1 was sent to 1136 subjects who had been registered as unemployed graduates from technical colleges for more than one year at the Labor Office. The response rate was similar to Sample 1: 41 per cent ($N = 467$, 44 per cent men, 56 per cent women).² The mean age was 29.8 years (SD 5.4, range 23–53). According to sex and length of unemployment, the sample was representative for the subpopulation of the registered long-term unemployed in the Netherlands (Schaufeli, 1988, pp. 110–111).

In contrast to respondents of Sample 1, who did not have any work experience in a previous professional job, 79 per cent of the respondents of Sample 2 had work experience. The average number of years employed was 2.6 years, varying from only 1 month to 8 years (SD 31 months).

After one year, a follow-up was conducted among the 317 respondents, who had returned their addresses separately from the questionnaire on a special form one year earlier (T_1). The response rate at the follow-up at T_2 was 82 per cent ($N = 261$). Forty-three per cent ($N = 111$) had found a job, whereas also 43 per cent ($N = 110$) was still looking for employment. Thirty-eight respondents (i.e. 15 per cent) whose employment status at T_2 was unknown or who had another status (e.g. student, early retired) were excluded. Unfortunately, 64 respondents removed their identification numbers, so that the data of both occasions could not be linked. Due to occasional missing data, 166 complete records were left for longitudinal analysis. Respondents and non-respondents at the follow-up did not differ systematically with respect to their length of unemployment ($t = 1.28$, n.s.), work experience ($t = 1.43$, n.s.), sex ($\chi^2 = 7.5$, n.s.), type of training ($\chi^2 = 3.35$, n.s.), psychological distress ($t = 1.03$, n.s.), number of job applications ($t = .41$, n.s.), and time spent on job hunting ($t = .05$, n.s.).

At the follow-up, 54 unemployed and 59 reemployed respondents were interviewed in depth, in an analogous way as in Sample 1.

Measures

Psychological distress Psychological distress was assessed by the Dutch version of the Symptom Checklist 90 (SCL-90) (Arrindell & Ettema, 1986) at T_0 , T_1 , and T_2 in Sample 1, and at T_1 in Sample 2. Because of its length, the SCL-90 has been replaced by the overlapping but much shorter Psych-Scale of the Dutch version of the Hopkins Symptom Checklist (Luteijn, Hamel, Kok & Bouman, 1984) at T_3 and T_4 in Sample 1, and

² A non-response survey was carried out (response rate 25 per cent, $N = 164$). The reason most frequently mentioned for not returning the questionnaire was that a (part-time) job had been found (37 per cent). Taking this into account the actual response rate of Study 2 in the target population must have been substantially higher.

T₂ in Sample 2. In the longitudinal analyses, the 15 out of the 17 items of the Psych-Scale that overlap with the SCL-90 have been utilized as indicator of psychological distress. Cronbach's alphas of this 15-item scale ranged from $\alpha = .80$ to $\alpha = .92$. Correlations of the Psych-Scale with the SCL-90 total score ranged from .93, to .99.

Employment status. In order to analyse the data of Sample 1 longitudinally, respondents of this sample were assigned an employment status score at every follow-up (T₁ through T₄). These scores indicate their labour market position at that particular time, taking into account previous changes in employment status. Table 1 shows the matrix of weights used to determine the respondent's employment status scores at a given time point, based on past status transitions.

Table 1. Employment status weights

Moving to from	Employment				Unemployment				Stud	Mil
	T ₁	T ₂	T ₃	T ₄	T ₁	T ₂	T ₃	T ₄	T ₁₋₄	T ₁₋₁
Employment	—	+2	+3	+4	—	-1	-1	-1	+1	0
Unemployment	—	+1	+1	+1	—	-2	-3	-4	+1	0
Studying	+1	+1	+1	+1	-1	-1	-1	-1	0	0

Note: Stud: Studying; Mil: Military service; —: No changes in employment status took place since all respondents were studying at T_i.

As noted earlier, all respondents attended school at T₀. Six months after their graduation (T₁) their employment status started to differ. Graduates at T₀ moved from studying to either employment (+1), unemployment (-1), further education (0), or compulsory military service (0) at T₁. Some examples may help to clarify the assignment of the employment status weights. Consider a respondent who found a job shortly after graduation and remained employed at all subsequent follow-ups. In this case, the position on the labour market steadily increases with the increasing work experience. Accordingly, the employment status score is +1 at T₁, +2 at T₂, +3 at T₃, and +4 at T₄. Reversely, respondents who did not manage to find a job at all four follow-ups received employment status scores of, respectively, -1, -2, -3 and -4, which expresses a continued decline of their labour market position. The respondents who continued their education or entered compulsory military service and did not change their status over the whole period, received a neutral weight (i.e. 0) on every occasion. When several status transitions have been made, the assignment of employment status weights is more complicated. For instance, suppose respondents who continued their training at T₁, found a job at T₂, remained employed at T₃, but unfortunately lost their job at T₄. The weights are assigned as follows: from T₀ to T₁ the respondent's status as a student did not change (score = 0), from T₁ to T₂ a positive transition took place (score = +1), the respondent's status changed from student to employed. At the next follow-up the employment status remained unchanged, but the labour market position improved (score = +2). Finally, at the last follow-up a negative status change took place (score = -1).

Results

Unemployment status and psychological distress: Cross-sectional analyses

Three questions are to be answered through a cross-sectional analysis of the data: (1) are unemployed graduates psychologically more distressed than their employed equivalents, or than those who have continued their education? (Sample 1), (2) are long-term unemployed graduates who remained without a job for another year psychologically more distressed than their counterparts who had meanwhile found a job? (Sample 2), and (3) are males and females psychologically affected by their employment status in different ways? (i.e. does an interaction effect exist between sex and employment status?) (Sample 1 and Sample 2).

Three different employment status groups were distinguished: respondents who were employed, unemployed, and those who continued their training. All male respondents who went into compulsory military service had to be excluded from the following analyses. Table 2 shows the means and standard deviations of the employment status groups and summarizes the results of five analyses of variance. T_0 (Sample 1) and T_1 (Sample 2) were not analysed, since all respondents had the same employment status at that time (i.e. attended college and long-term unemployed, respectively).

In line with the expectations, the long-term unemployed graduates of Sample 2, who had *not* found a job yet at the one-year follow-up, reported greater psychological distress than the reemployed group. Unexpectedly, the significant F value at T_1 in Sample 1 can be attributed to *the student group*. That group showed a remarkable high level of distress compared to the employed group ($t = 2.11, p < .05$), as well as to the unemployed group ($t = 2.89, p < .05$). When the unemployed respondents of Sample 1 were contrasted with the employed respondents and the students, the unemployed generally showed higher mean levels of distress. However, only at T_2 this difference was significant ($t = 2.08, p < .05$).

The females of Sample 1 reported consistently higher levels of psychological distress than males. However, a similar sex difference was *not* observed in Sample 2. Moreover, *no* significant interaction effects were found between sex and employment status. In Sample 1 an interaction effect was clearly absent, while it just lacked statistical significance in Sample 2 ($p = .09$). Apparently (long-term) unemployed males do *not* suffer greater psychological distress than (long-term) unemployed females.

Unemployment status and psychological distress: Longitudinal analyses

Two assumptions are specific to our longitudinal model that is employed in Sample 1. The first one is the differentiation in a stable and a changing component in predicting psychological distress. It is assumed that psychological distress results from both relatively stable personality factors that reflect the individual's vulnerability to negative situations, and from less stable (e.g. social) conditions at the time of distress, including unemployment (cf. Allen & Potkey, 1981). A longitudinal stability and change model is proposed that hypothesizes a stable and a changing component of psychological distress, and estimates their relative contribution to the actual symptom level (Heady & Wearing, 1989; Ormel & Schaufeli, 1991). It is important to note that the stable and changing components are unobserved hypothetical constructs, that are *not* measured by manifest variables. However, Ormel & Schaufeli (1991) demonstrated that the stable component is substantively related to self-esteem (negative) and to external locus of control (positive), which underscores the validity of the vulnerability component.

A second assumption specific to our longitudinal model is the inclusion of a carry-over effect of psychological distress across different points in time. In other words, it is proposed that the actual level of distress is influenced by the previous level. Several life-event studies showed that the level of initial symptomatology is a much better predictor of actual psychological distress than the life-events to which the individual had been exposed (Grant, Yager, Sweetwood & Olshen, 1982; Monroe, 1982; Warheit, 1979). To date, in unemployment research carry-over effects are not considered, with one notable

Table 2. Employment status and psychological distress Cross-sectional analyses of Sample 1 and Sample 2

	Sample 1																	
	T ₁						T ₂						T ₃					
	E		UE		S		E		UE		S		E		UE		S	
	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
M	5.1	7.0	5.2	6.2	5.9	9.8	4.2	6.1	6.0	7.5	4.2	8.2	5.1	6.9	6.6	6.5	4.9	7.1
SD	5.8	7.0	5.6	5.9	5.7	8.1	4.9	5.8	7.3	7.2	4.9	6.5	5.5	6.2	6.0	6.0	4.5	4.7
N	113	70	91	101	64	29	147	131	56	40	38	22	202	138	40	25	35	14
F (status)	3.25*						2.75						.36					
F (sex)	10.89**						8.49*						6.98*					
F (interaction)	.97						.74						.74					

	Sample 1						Sample 2			
	T ₁			T ₂			T ₁		T ₂	
	E		UE	S		E		UE		
	M	F	M	F	M	F	M	F	M	F
M	4.7	6.5	5.7	7.1	5.5	7.9	7.3	5.6	6.9	9.0
SD	4.9	6.2	7.0	7.3	5.9	6.6	6.8	6.5	9.3	6.8
N	231	135	35	25	27	18	36	48	32	53
F (status)	1.27			3.45*						
F (sex)	9.00*			.01						
F (interaction)	.22			2.90						

*p < .05, **p < .01
 Note: E = Employed, UE = Unemployed, S = Student

exception Dooley *et al.* (1986) demonstrated that the effect of employment status on depression and anxiety disappeared when prior symptom levels were included in the analysis

The LISREL (Linear Structural RELations) approach was utilized to examine which factors are responsible for persistence and for change in actual symptom levels (Jöreskog & Sorbom, 1985). The structural model was developed stepwise among 175 randomly selected respondents of Sample 1, and next, a cross-validation was conducted among the other half of Sample 1 ($N = 178$).

The present structural model is pictured in Fig. 1. The five latent psychological distress variables (D_0 to D_4) are each measured by two indicators (that are not displayed for reasons of economy). These two indicators were obtained by conducting a random split of the 15 psychological distress items into a set of seven and eight items. In order to eliminate systematic variance, this randomization procedure was carried out separately at each point in time. Moreover, the model assumes that the variance of the person's true psychological distress scores can be attributed to two hypothetical constructs: a stable vulnera-

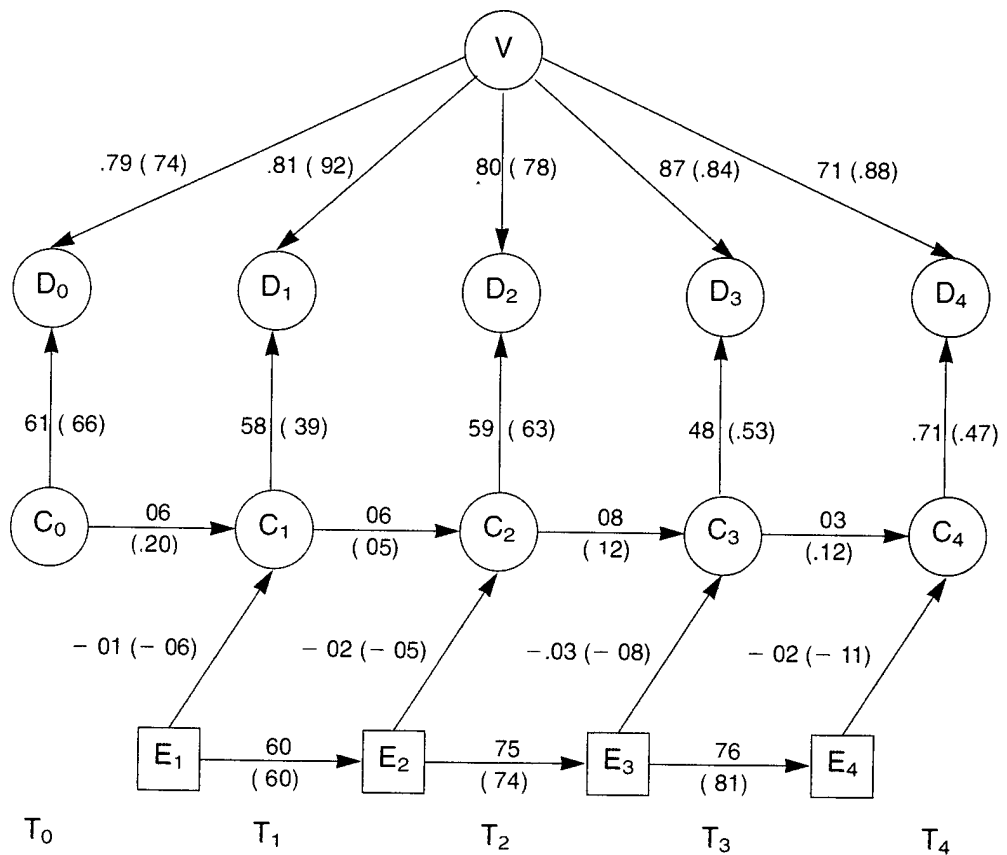


Figure 1 The longitudinal stability-change model (standardized LISREL-estimates, $N = 175$). Note: The estimates of the cross-validation ($N = 178$) are in parenthesis

bility component (V) and a changing component (C₀ to C₄). Finally, the changing component of psychological distress is assumed to be influenced by the graduates' employment status (E₁ to E₄).

The fit of structural models to the data is difficult to evaluate, particularly when—as in our study—the sample size is large. In that case the χ^2 goodness-of-fit statistic is very powerful and even quite good model-fits will produce statistically significant differences (Bollen, 1990). Therefore, several alternative fit-indices have been proposed (cf. Marsh, Balla & McDonald, 1988). Among the simplest of these is the ratio of the χ^2 statistic to its degrees of freedom ($\chi^2/d.f.$) that is employed in the present study. According to Marsh & Hocevar (1985), values for this ratio close to the expected value of 1.0 are indicative for well-fitting models, whereas values ranging from 2.0 to 5.0 indicate an acceptable model fit. As expected in this large sample, the χ^2 statistic is significant ($\chi^2(33) = 84.29, p < .001$). However, the ratio of this statistic with its degrees of freedom is well within the acceptable range ($\chi^2/d.f. = 2.55$).

In Fig. 1, the standardized LISREL estimates are presented, which can be interpreted as follows. First, the coefficients linking the true distress levels (D₀ to D₄) with the stable component (V) are estimates of the correlation. The coefficients range from .71 to .87, suggesting that between 50 and 76 per cent (mean 64 per cent) of the variance in true distress scores represents between-subjects variation in stable distress level. Accordingly, between 50 and 24 per cent (mean 36 per cent) of the variance in distress scores is attributable to the changing component. Secondly, the auto-regression coefficient of the changing components of psychological distress (C_{*t*}) are not significant, ranging from .03 to .06. Thirdly, the carry-over effect of employment status appeared to be relatively strong, accounting for 60 to 76 per cent of the variance. This is not very surprising since the respondents moved predominantly in one direction: from non-employment (i.e. unemployment, military service, and college) to employment. Last but not least, employment status (E_{*t*}) does *not* influence the changing component of psychological distress. Virtually no variance in distress (i.e. less than 1 per cent) is explained.

A cross-validation, in which all parameters were freely estimated in the independent subsample (the other half of Sample 1: $N = 178$), yields a similar fit: $\chi^2_{(33)} = 79.11 (p < .001)$, $\chi^2/d.f. = 2.39$. Also, the standardized LISREL estimates differ only slightly from the estimates obtained in previous analysis (see Fig. 1, between parentheses). For instance, on average 69 per cent of the variance in true distress scores has to be attributed to the stable component, whereas 31 per cent has to be attributed to the changing component. Accordingly, the parameter estimates can be considered as relatively stable across independent samples from the same population.

Reemployment and psychological distress

Compared to Sample 1, the analysis of employment status transitions in the long-term unemployed sample is quite straightforward. Only the effects of a positive status transition—reemployment—and of prolonged unemployment can be investigated. No negative status transitions took place since all graduates have been unemployed already at T₁. Table 3 shows the results of a repeated measurement analysis of variance (MANOVA), with employment status (unemployed/reemployed at T₂) as an independent variable and psychological distress as a dependent variable.

Table 3. Employment status and psychological distress. Longitudinal analysis Sample 2

	T ₁ ^a		T ₂	
	E	UE	E	UE
M	7.2	10.4	6.3	8.2
SD	8.1	8.9	7	6.4
N	82	84	82	84
F (status)			5.55*	
F (time)			11.62***	
F (interaction)			1.94	

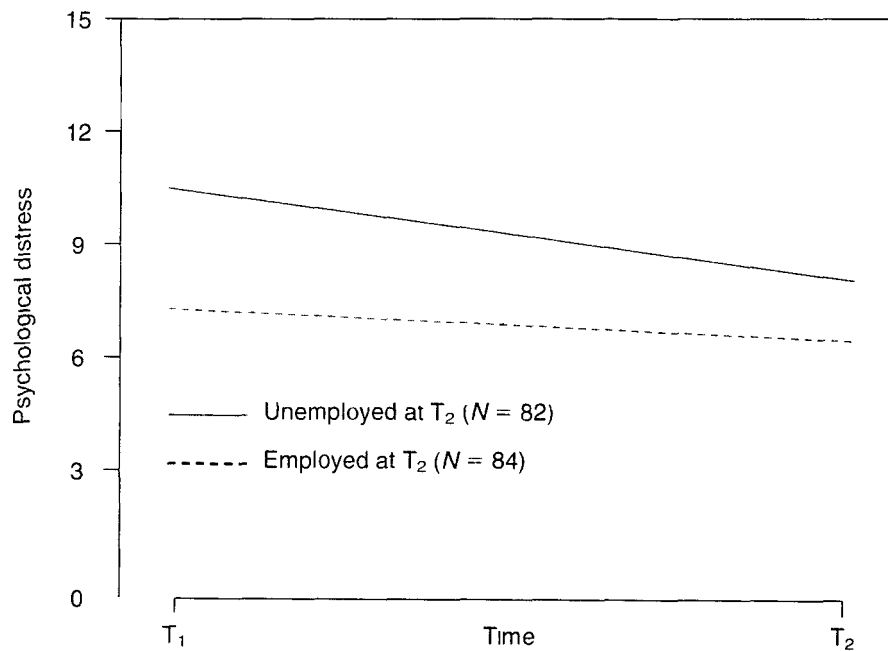
* $p < .05$, *** $p < .001$

Note E = Employed, UE = Unemployed

^aEmployed or unemployed at T₂

A remarkable effect of employment status emerged, which is illustrated by Fig. 2. The unemployed respondents showed higher mean levels of psychological distress, not only at T₂, but also at T₁. The fact that the reemployed respondents exhibited much lower initial levels of distress compared with the permanently unemployed graduates suggests a selection effect. Obviously, the psychologically most healthy respondents had been successful on the labour market, whereas the less healthy respondents remained unemployed.

Moreover, the time effect was most prominent. This means that the mean level of psychological distress decreased significantly from T₁ to T₂, irrespective of employment status.

Figure 2 Mean level of psychological distress T₁-T₂ (Sample 2)

Discussion

In the present study, cross-sectional analyses indicated that unemployment was associated with psychological distress only among the long-term unemployed respondents (Sample 2). Recent graduates from technical colleges who were not yet successful in finding a job (Sample 1) did not experience more psychological distress than recent graduates who were either successful in that respect, or who continued their education. Moreover, the association between employment status and psychological distress was similar for both men and women. Unexpectedly, males and females appeared not to react differently to unemployment, a result that can be explained by the high correlation among women between level of education and egalitarian sex-role attitudes (VanYperen & Buunk, 1991).

Longitudinal analyses revealed two interesting results in Sample 2. First, a selection effect was observed: less distressed long-term unemployed graduates were more likely to find a job, whereas the more distressed were more likely to remain unemployed. Several explanations can be given for this unexpected effect. For instance, employers may have selected the psychologically most healthy applicants or the less healthy respondents applied less for jobs. Moreover, unemployed individuals who graduated in particular fields might correctly and realistically anticipate a greater likelihood of unemployment than their counterparts in other fields. As a result they may become more distressed and may therefore be less likely to find a job, either because they are rejected by the employer, or because they do not engage in active job hunting.

However, it is important to note that neither explanation rules out the possibility that unemployment leads to more psychological distress. Since initially at T₁ the respondents of Sample 2 were unemployed for at least one year, it can be speculated that during the first year(s) of unemployment their level of psychological distress has increased as a consequence of the unemployment experience.

Second, a general tendency towards a better psychological health was observed, not only—as expected—in the reemployed group, but also among the continuously long-term unemployed. It can be speculated that the latter group has reached a *plateau* of ill-health, after which an adaptive process commenced, eventually resulting in less psychological distress. Support for the positive effect of long-term adaptation to unemployment comes from Payne (1987). He found that the reduction of distress sets in after being unemployed for two years, a similar period as investigated in Sample 2.

In both samples, it was demonstrated that employment status did not substantially influence the level of psychological distress among (recent) graduates. Less than 1 per cent of the variance in psychological distress was explained by the employment status in both samples. In contrast, in a review Fryer & Payne (1986) showed that employment status accounted for about 14 per cent of the variance in psychological distress among young schoolleavers. The discrepancy with the present results is obvious. This is even more striking since we have used a sophisticated structural model (in Sample 1) which essentially maximized the degree of this effect (e.g. by controlling for measurement error). At the same time, however, the model also included a stable vulnerability component that explained about twice as much variance of psychological distress than the changing component. Obviously, distress levels are relatively stable across time, leaving only little room for environmental change agents such as employment status to affect current levels of distress. In other words, the respondent's level of distress is not so much dependent upon environmental factors (e.g. unemployment), but seems to refer to personal vulnerability.

In two other community studies, using a similar longitudinal model, a comparably large amount of variance in psychological distress was attributed to this stable component Henderson, Byrne & Duncan-Jones (1981), as well as Ormel & Schaufeli (1991) found that about two thirds of the variance of distress was accounted for by the stable vulnerability component. Apparently, as in the current study, some individuals are psychologically distressed at any moment, whereas others are not. This is in line with the conclusion that Depue & Monroe (1986) draw in their review of recent life-stress research 'Our discussion suggests that stable attributes of the individual are equal to, or more powerful than, socio-environmental factors in predicting human disorder' (p. 48).

Although we can only speculate, it is quite likely that the unique Dutch structural and cultural context is responsible for the major finding of the current study, namely that negative changes in employment status are minimally related to psychological distress. For instance, the additional interviews suggest that the respondents did *not* experience unemployment as a stressful life-event. The unemployed were asked to compare the advantages and disadvantages of unemployment, and to indicate to what extent they had experienced their situation as stressful. It appeared that only 12 per cent of the responses of the long-term unemployed and 6 per cent of the responses of the unemployed college graduates could be classified as stressful. This is understandable, when the Dutch context is taken into consideration, which is characterized—as we have mentioned earlier—by relatively high unemployment benefits and by a tendency towards cultural normalization of unemployment. In addition, employment prospects for technical college graduates suddenly and unexpectedly improved in the period that the study was conducted: unemployment rates dropped from 14.6 per cent in 1986 to about 7 per cent in 1988.

In conclusion, particularly the unemployed who recently graduated from technical colleges appear to be effective copers who are well equipped to handle their situation. This was confirmed by the additional interviews. Most unemployed college graduates proactively pursued genuine interests to counteract boredom and many of them were heavily engaged in different types of activities. For instance, half of the interviewed long-term unemployed (Sample 2) and about 40 per cent of the recently graduated college graduates (Sample 1) had an unpaid job, mostly in the field in which they had been trained. Accordingly, it can be argued that for this group the latent functions of employment (Jahoda, 1982) are fulfilled. Although to a lesser degree than paid work, unpaid work also imposes a time structure, implies regularly shared experiences and contacts, links the individual to collective goals and purposes, defines aspects of personal status and identity, and enforces activity.

The current study suggests that unemployment does not necessarily lead to psychological distress, as is impressively documented in many other studies and underscores the importance of group and context-specific factors. Obviously, the psychological consequences of unemployment are moderated by aspects of the particular group under study (i.e. level of education) as well as by the specific structural and cultural context.

Acknowledgement

This research was supported by the Netherlands Organization for Scientific Research (Grant #560-268-002)

References

- Allen, B P & Potkey, C R (1981) On the arbitrary distinction between states and traits *Journal of Personality and Social Psychology*, 41, 916–928
- Arrindell, W A & Ettema, J H M (1986) *SCL-90. Handleiding bij een Multidimensionale Psycho-pathologie-indicator* [SCL-90 Manual for a multidimensional psychopathology-indicator] Lisse. Swets & Zeitlinger
- Bachman, J G & O'Malley, P M (1977) Self-esteem in young men: A longitudinal analysis of the impact of educational and occupational attainment *Journal of Personality and Social Psychology*, 35, 365–380
- Bakke, E W (1940) *Citizens Without Work: A Study of the Effects of Unemployment Upon the Workers' Social Relations and Practices* New Haven, CT: Yale University Press
- Banks, M H & Jackson, P R (1982) Unemployment and risk of minor psychiatric disorder in young people: Cross-sectional and longitudinal evidence *Psychological Medicine*, 12, 789–798
- Bollen, K A (1990) Overall fit in covariance structure models: Two types of sample size effects *Psychological Bulletin* 107, 256–259
- Bolton, W & Oatley, K (1987) A longitudinal study of social support and depression in unemployed men *Psychological Medicine*, 17, 453–460
- Depue, R A & Monroe, S M (1986) Conceptualization and measurement of human disorder in life stress research: The problem of chronic disturbance *Psychological Bulletin*, 99, 36–51
- Donovan, A & Oddy, M (1982) Psychological aspects of unemployment: An investigation into the emotional and social adjustment of school leavers *Journal of Adolescence*, 5, 15–30
- Dooley, D, Catalano, R & Brownell, A (1986) The relation of economic conditions, social support, and life events to depression *Journal of Community Psychology*, 14, 103–119
- Eisenberg, P & Lazarsfeld, P F (1938) The psychological effects of unemployment *Psychological Bulletin*, 45, 358–390
- Estes, R J & Wilensky, H L (1978) Life cycle squeeze and the moral curve *Social Problems*, 25, 277–292
- Feather, N T (1990) *The Psychological Impact of Unemployment* New York: Springer-Verlag
- Feather, N T & Bond, M J (1983) Time structure and purposeful activity among employed and unemployed university graduates *Journal of Occupational Psychology*, 56, 241–254
- Fineman, S (1979) A psychological model of stress and its application to managerial unemployment *Human Relations*, 32, 323–345
- Fineman, S (1983) *White Collar Unemployment: Impact and Stress* New York: Wiley
- Frohlich, D (1983) Economic deprivation, work orientation and health: Conceptual ideas and some empirical findings. In J. John, D. Schwefel & H. Zollner (Eds), *Influence of Economic Instability on Health*, pp. 293–320. Berlin: Springer-Verlag
- Fryer, D (1985) Stages in the psychological responses to unemployment, A (dis)integrative review article *Current Psychological Research and Reviews*, 4, 257–273
- Fryer, D & Payne, R L (1984) Proactivity in unemployment: Findings and implications *Leisure Studies*, 3, 273–295
- Fryer, D & Payne, R L (1986) Being unemployed: A review of the literature on the psychological experience of unemployment. In C L Cooper & I Robertson (Eds), *International Review of Industrial and Organizational Psychology*, pp. 235–277. New York: Wiley
- Goodchilds, J D & Smith, E E (1963) The effects of unemployment as mediated by social status *Sociometry*, 26, 287–293
- Gurnev, R M (1980) The effects of unemployment on the psycho-social development of schoolleavers *Journal of Occupational Psychology*, 53, 205–213
- Gurnev, R M & Taylor, K F (1981) Research on unemployment: Defects, neglects and prospects *Bulletin of The British Psychological Society*, 34, 349–352
- Grant, I, Yager, J, Sweetwood, H & Olshen, R (1982) Life events and symptoms: Fourier analysis of time series from a three-year prospective inquiry *Archives of General Psychiatry*, 39, 589–605
- Hartley, J F (1980) The impact of unemployment upon the self-esteem of managers *Journal of Occupational Psychology*, 53, 147–155
- Haves, J & Nutman, P (1981) *Understanding the Unemployed: The Psychological Effects of Unemployment* London: Tavistock
- Head, B & Wearing, A (1989) Personality, life-events and subjective well-being: Toward a dynamic equilibrium model *Journal of Personality and Social Psychology*, 57, 731–739

- Henderson, A. D., Byrne, D. G. & Duncan-Jones, P. (1981) *Neurosis and the Social Environment* Sydney Academic Press
- Hepworth, S. J. (1980) Moderating factors of the psychological impact of unemployment *Journal of Occupational Psychology* 53, 139-146
- Iversen, L. & Sabroe, S. (1988) Psychological well-being among unemployed and employed people after a company closedown: A longitudinal study *Journal of Social Issues* 44, 141-152
- Jackson, P. R., Stafford, E. M., Banks, M. H. & Warr, P. B. (1983) Unemployment and psychological distress in young people: The moderating role of employment commitment *Journal of Applied Psychology* 68, 525-535
- Jahoda, M. (1982) *Employment and Unemployment: A Social-Psychological Analysis* Cambridge Cambridge University Press
- Joreskog, K. G. & Sorbom, D. (1985) *LISREL VI. Analysis of Linear Structural Relationships by Maximum Likelihood Instrumental Variables and Least Squares Methods* Mooresville: Scientific Software
- Kasl, S. V. (1982) Strategies of research on economic instability and health *Psychological Medicine* 12, 637-649
- Kasl, S. V., Gore, S. & Cobb, S. (1975) The experience of losing a job: Reported changes in health, symptoms, and illness behavior *Psychosomatic Medicine* 37, 106-122
- Kaufman, H. G. (1982) *Professionals in Search of Work: Coping with the Stress of Job Loss and Underemployment* New York: Wiley
- Kessler, R. C., House, J. S. & Turner, J. B. (1987) Unemployment and health in a community sample *Journal of Health and Social Behavior* 28, 51-59
- Kirchler, E. (1985) Job loss and mood *Journal of Economic Psychology* 6, 9-25
- Kjos, D. L. (1988) Job search activity patterns of successful and non-successful job seekers *Journal of Employment Counseling* 25, 4-6
- Knepper, S. (1991) De epidemie van psychische arbeidsongeschiktheid [The epidemic of work disablement on psychological grounds] In R. Bijl & D. Bauduin (Eds), *Arbeidsongeschikt Wegens Psychische Stoornissen* pp 7-26 [Work disabled because of mental illness] Utrecht: NcGV
- Lahelma, E. (1989) Unemployment, re-employment and mental well-being: A panel study of industrial job-seekers in Finland *Scandinavian Journal of Social Medicine*, Supplementum 43
- Lethinen, V. (1984) Unemployment and mental disturbance *Scandinavian Journal of Work, Environment and Health* 10, 505-509
- Linn, M. W., Sandifer, R. & Stein, S. (1985) Effects of unemployment on mental and physical health *American Journal of Public Health* 75, 502-506
- Luteijn, F., Hamel, L. F., Bouman, T. K. & Kok, A. R. (1984) *Handleiding bij de HSCL Hopkins Symptom Checklist* (Manual for the HSCL Hopkins Symptom Checklist) Lisse: Swets & Zeitlinger
- Maassen, G. H. & De Goede, M. P. M. (1987) Hoe zien andere mensen werklozen en hoe zien werklozen zichzelf: Resultaten van tien jaar onderzoek over publieke opinie [How do others perceive the unemployed and how do the unemployed perceive themselves: Results of an investigation about public opinion over a ten-year-period] In I. P. Spruit & F. Tazelaar (Eds), *Leven met Werkloosheid* [Living out of work], pp 99-111 Groningen: Wolters-Noordhoff
- Marsh, H. W. & Hocevar, D. (1985) Applications of confirmatory factor analysis to the study of self-concept: First- and higher order factor models and their invariance across groups *Psychological Bulletin* 97, 562-582
- Marsh, H. W., Balla, J. R. & McDonald, R. P. (1988) Goodness-of-fit indexes in confirmatory factor analysis: The effects of sample size *Psychological Bulletin* 103, 391-410
- Melville, D. I., Hope, D., Bennison, D. & Barraclough, B. (1985) Depression among men made involuntarily redundant *Psychological Medicine* 15, 789-793
- Monroe, S. M. (1982) Life events and disorder: Event-symptom associations and the course of disorder *Journal of Abnormal Psychology* 91, 14-24
- Ornel, J. & Schaufeli, W. B. (1991) Stability and change in psychological distress and their relationship with self-esteem and locus of control: A dynamic equilibrium model *Journal of Personality and Social Psychology* 60, 288-299
- Ostell, A. & Divers, P. (1987) Attributional style, unemployment and mental health *Journal of Occupational Psychology* 60, 333-337
- Patton, W. & Noller, P. (1984) Unemployment and youth: A longitudinal study *Australian Journal of Psychology* 36, 399-413

- Payne, R. L. (1987) A longitudinal study of the psychological well-being of unemployed men and the mediating effect of neuroticism. Unpublished manuscript, University of Sheffield, Department of Psychology
- Payne, R. L. & Jones, J. G. (1987) Social class and reemployment: Changes in health and perceived financial circumstances. *Journal of Occupational Behaviour*, 8, 175-184
- Pukey, W. W. (1970) *Self-Concept and School Achievement*. New Jersey: Prentice-Hall
- Rowley, K. M. & Feather, N. T. (1987) The impact of unemployment in relation to age and length of unemployment. *Journal of Occupational Psychology*, 60, 323-332
- Schaufeli, W. B. (1988) Unemployment and psychological health: An investigation among Dutch professionals. Unpublished doctoral dissertation, University of Groningen, Groningen, The Netherlands
- Schaufeli, W. B. (in press) Unemployment and mental health in well and poorly educated school-leavers. In K. Verhaar & L. Jansma (Eds), *On the Mysteries of Unemployment*. Deventer: Kluwer
- Schwefel, D. (1986) Unemployment, health and health services in German-speaking countries. *Social Science and Medicine*, 22, 409-430
- Shamir, B. (1986) Self-esteem and the psychological impact of unemployment. *Social Psychology Quarterly*, 49, 61-72
- Smith, D. J. (1981) *Unemployment and Racial Minorities*. London: Policy Studies Institute
- Stokes, G. & Cochrane, R. (1984) A study of the psychological effects of redundancy and unemployment. *Journal of Occupational Psychology*, 57, 309-322
- Tiggemann, M. & Winefield, A. H. (1980) Some psychological effects of unemployment in school-leavers. *Australian Journal of Social Issues*, 15, 269-276
- Tiggemann, M. & Winefield, A. H. (1984) The effects of unemployment on the mood, self-esteem, locus of control, and depressive affect of school-leavers. *Journal of Occupational Psychology*, 57, 33-42
- Van Yperen, N. W. & Buunk, B. P. (1991) Sex-role attitudes, social comparison, and satisfaction with relationships. *Social Psychology Quarterly*, 54, 169-180
- Warher, G. (1979) Life events, coping, stress, and depressive symptomatology. *American Journal of Psychiatry*, 136, 502-507
- Warr, P. B. (1984) Job loss, unemployment and psychological well-being. In L. V. Allen & E. Van de Vliert (Eds), *Role Transitions: Explorations and Explanations*, pp. 263-285. New York: Plenum Press
- Warr, P. B. (1987) *Work, Unemployment and Mental Health*. Oxford: Clarendon Press
- Warr, P. B. & Jackson, P. (1985) Factors influencing the psychological impact of prolonged unemployment and of re-employment. *Psychological Medicine*, 15, 795-807
- Warr, P. B. & Parry, G. (1982) Paid employment and women's psychological well-being. *Psychological Bulletin*, 91, 498-516
- Warr, P. B., Jackson, P. & Banks, M. (1988) Unemployment and mental health: Some British studies. *Journal of Social Issues*, 44, 47-68
- Winefield, A. H. & Tiggemann, M. (1985) Psychological correlates of employment and unemployment: Effects, predisposing factors, and sex differences. *Journal of Occupational Psychology*, 58, 229-242
- Winefield, A. H. & Tiggemann, M. (1989) Job loss vs failure to find work as psychological stressors in the young unemployed. *Journal of Occupational Psychology*, 62, 79-85