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Effects of parenting style upon psychological well-being of young adults: Exploring the relations among parental care, locus of control, and depression.

Taris, T.W.; Bok, I. A.

published in

Early Child Development and Care
1997

DOI (link to publisher)

[10.1080/030044397013201008](https://doi.org/10.1080/030044397013201008)

document version

Publisher's PDF, also known as Version of record

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citation for published version (APA)

Taris, T. W., & Bok, I. A. (1997). Effects of parenting style upon psychological well-being of young adults: Exploring the relations among parental care, locus of control, and depression. *Early Child Development and Care*, (132), 104. <https://doi.org/10.1080/030044397013201008>

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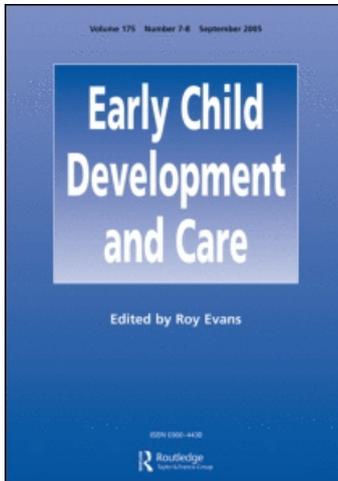
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Early Child Development and Care

Publication details, including instructions for authors and subscription information:

<http://www.informaworld.com/smpp/title~content=t713640830>

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To cite this Article Taris, Toon W. and Bok, Inge A.(1997) 'Effects of Parenting Style Upon Psychological Well-being of Young Adults: Exploring the Relations Among Parental Care, Locus of Control and Depression', *Early Child Development and Care*, 132: 1, 93 – 104

To link to this Article: DOI: 10.1080/030044397013201008

URL: <http://dx.doi.org/10.1080/030044397013201008>

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Effects of Parenting Style Upon Psychological Well-being of Young Adults: Exploring the Relations Among Parental Care, Locus of Control and Depression

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(Received 24 February 1997)

The current study explores the relations among parenting styles and depression among a representative longitudinal sample of 642 young Dutch adults. We assumed that if parents show their involvement during the first sixteen years of the lives of their children, these children are more likely to develop an internal locus of control. In turn, children with an internal locus of control would be less likely to experience feelings of depression later in life. Additionally, we examined the reverse relation, namely that depression leads to a shift away from the internal pole of the locus of control dimension.

These notions were tested using structural equation models. The results indicated that our expectations were largely tenable. However, while the effects of mother's and father's involvement upon the development of an internal locus of control seemed to differ, for depression feelings we did not find much difference. Implications of the study are discussed.

Key words: Depression; locus of control; parenting styles; adolescence; personality; psychological health.

The current study examines young adults' feelings of depression at two time points in time as a function of (a) the degree to which they feel able to influence things that happen to them (locus of control, Rotter, 1966); and (b) the degree to which they feel that their parents provided a warm, loving and caring upbringing during the first sixteen years of their lives. The reasoning in this study can be summarised in the form of three research-based assumptions:

- (1) We assume that parents' styles of upbringing contribute to the development of the "inner resources" of their children. Children of highly involved parents

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feel more competent, to display greater control understanding, and to have a more internal locus of control than those of less involved parents (Gordon, Nowicki & Wickern, 1981; Grolnick & Ryan, 1989; Grolnick, Ryan & Deci, 1991; Taris & Bok, 1996).

- (2) There are important relations between feelings of being in control, and psychological health. Feelings of depression are highly correlated to feelings of powerlessness and having an external locus of control (e.g., Goldberg, 1972; Schaufeli, Maslach & Marek, 1993); indeed, often feelings of powerlessness have been considered as manifestations of depression. Thus, one line of research assumes that depression leads to feelings of powerlessness.
- (3) However, from a different angle it can be argued that the reverse holds as well, thus, that depressive feelings are not just a cause of diminished feelings of control. Not being in control of a situation may result in depression, as externally oriented subjects will be less able to induce changes to circumstances that may potentially lead to depressive feelings (Taris, Bok & Caljé, 1996).

Taken together, these three assumptions summarise the reasoning in the remainder of this study. We expect that the perceptions of young adults of their parents' parenting styles are related to their feelings of being able to control their environment; these feelings of control, in turn, will be related to their scores on measures of depression. Conversely, depressive feelings will also affect feelings of being in control. These notions are examined using longitudinal data from a representative sample of 642 Dutch young (age 18–30) adults, who were interviewed twice with a four-year interval in between. Below we first provide an overview of the background of this study, and a more elaborate discussion of the hypotheses to be tested.

PARENTAL INVOLVEMENT AND LOCUS OF CONTROL

The concept of a "bond" between parent and child is generally accepted. Theoretically, parent-child bonds would be broadly influenced by characteristics of the child, characteristics of the parent, and characteristics of the parent-child relationship itself (Parker, Tupling & Brown, 1979). Previous research has shown that especially parental bonding-related behaviors such as care, involvement, affection, sensitivity, cooperation, accessibility and the like promote the development of an internal locus of control in their children (Gordon *et al.*, 1981; Taris & Bok, 1996). Thus, children of highly involved parents generally feel more competent, display greater control understanding, and have a more internal locus of control than those of less involved parents.

It is, however, as yet unclear how this process unfolds over time. It could be that the influence of perceived parenting styles upon their children's locus of control is limited across time, that is, once this effect is controlled for effects of parenting styles upon subsequent measures of locus of control disappear. On the

other hand, it could also be that parental involvement exerts a lasting influence upon children's locus of control. Indeed, such a longitudinal effect would greatly support the reasoning that parenting styles affect locus of control. Previous studies in this field (e.g., Gordon *et al.*, 1981; Grolnick & Ryan, 1989; Grolnick *et al.*, 1991) have all employed a cross-sectional design, whereas it is certainly conceivable that children's characteristics (such as their locus of control) "pull" for certain behaviors from their parents (Bell, 1968) such an interpretation undermines the cross-sectional evidence that parental behavior influences their offspring's characteristics. Thus, it appears that the available evidence on the effects of parental involvement upon children's locus of control is ambiguous, and has yet to be confirmed by longitudinal data.

Several studies have indicated that there are differences between fathers and mothers regarding the effects of their style of parenting, and that these effects are dependent upon the gender of their child. Several studies have revealed that the father's and mother's involvement with their child have differential implications for their child's development (i.e., Grolnick *et al.*, 1991; O'Brien, 1996; Rollins & Thomas, 1979): usually, the effects of parenting styles are somewhat stronger for mother. Eccles (1987) considers the role of parents as socializing agents in relation to the child's gender. She proposes that for girls a successful socialisation process means that they are passive, have a low motivation to achieve and compete, and have an external locus of control, whereas for boys a successful socialisation process would lead to a strong motivation to achieve and an internal locus of control. Taken together, these notions suggest that mother's involvement with her child would have stronger effects than the father's involvement, and that the results of their involvement may have different effects for boys and girls. However, evidence regarding this process is sparse which means that it is uncertain whether there really are differences between fathers and mothers regarding the effects of their style of parenting, and whether this interacts with the child's gender. Thus, in our analyses we will explore the possibility that there are differential effects of fathers' and mothers' parenting styles, rather than to test firm hypotheses regarding such possible differences.

CONTROL AND DEPRESSION: RECIPROCAL RELATIONS?

One common observation is that feelings of depression affect one's sense of themselves as the locus of initiation (or causality) of their actions. Indeed, theoretical approaches to depression have considered feelings of powerlessness both the result and the manifestation of depression (cf. Dohrenwend, Levav & Shrout, 1986; Goldberg, 1972; Schaufeli, Maslach & Marek, 1993; Taris & Bok, 1996). Although locus of control is often considered a trait (and, thus, as being relatively stable across time), previous research has shown that this concept is subject to change induced by changes in one's environment (e.g., Van der Velde & Feij, 1995; Van der Velde, Feij & Taris, 1995). Thus, we expect an effect of depression upon locus of control; depressive subjects will be more likely to experience feelings of powerlessness, and to have an external locus of control.

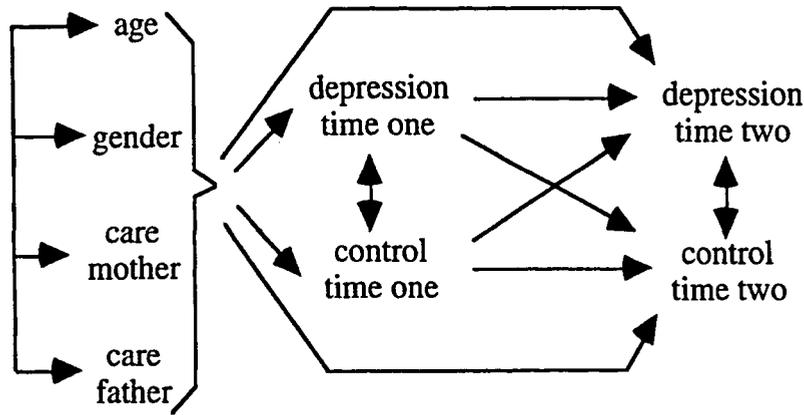


Figure 1 Relations among parenting styles, depression, and locus of control.

The reverse relation however may also hold. Life-span developmental theory (Lerner, 1982, 1984) holds that subjects are active producers of their own development, rather than passive recipients of the influences of their environments. Internally oriented people are more likely to believe they can influence their environments and the things that occur to them than subjects with an external locus of control. As a result, they are also more likely to be active producers of their own development than others. Stated differently, if it is the case that feelings of depression are induced by environmental factors, the subject's locus of control will determine the degree to which such feelings persist across time and whether subjects are able to improve their situation (Taris *et al.*, 1996). This reasoning implies that having an internal locus of control will be negatively related to feelings of depression: persons who feel able to exert influence over their environments will be more likely to shape this environment in such a way, that possible feelings of depression are prevented or resolved, by changing the characteristics of a situation that might otherwise lead to feelings of depression.

The model presented in Figure 1 presents a summary of the theoretical notions outlined above, as applied to data from a longitudinal panel study with two waves.

Figure 1 shows that our model examines the effects of four independent variables (the subject's age and gender, and the perceived style of parenting of their father and mother) upon two sets of dependent variables (including depression and locus of control) as measured at two occasions. We do not explicate the relations between locus of control and depression *within* a particular occasion, because the available evidence does not justify preferring an effect of locus of control upon feelings of depression to the reverse effect. Instead, we only assume that at both time points there will be a substantive relation between both variables, indicated by the two-head arrows in Figure 1. In effect, this means that the model accounts for possible

covariation between depression and locus of control measured at a particular occasion, without assigning any *a priori* causal direction to this covariation (Jöreskog & Sörbom, 1993). Whereas we do not explicate the relationships between locus of control and depression within any occasion, we do consider the “cross-lagged” causal effects of these two variables (Kessler & Greenberg, 1981). Comparison of the estimates of these cross-lagged effects may indicate the relative causal priority of these variables.

Regarding the effects of parenting style, we include the subjects’ separate perceptions of their fathers’ and mothers’ involvement. In principle we expect that more involvement will lead to a shift towards an internal locus of control, and lower levels of depressive feelings. There may be differences between the effects of father’s and mother’s involvement, but we do not formulate *a priori* hypotheses regarding these possible differences. Additionally, it may be the case that the effects of mother’s and father’s involvement are different for boys and girls; again, this possibility will be explored rather than tested.

METHOD

Sample

The data were collected in a longitudinal study among a sample of 642 young adults, aged 18 to 26 years at the first wave of the study (52.7% female, mean age 22.02 years, $sd = 3.30$). They were interviewed by trained interviewers using a standardized interview schedule regarding their attitudes and behavior on a number of life domains. Additionally, they completed a written questionnaire addressing background variables, personality factors, and psychological health. The first wave of the study was conducted during fall/winter 1987/1988; the second wave was conducted four years later, in fall/winter 1991/1992.

Variables

Depression

As a measure of the subjects’ feelings of depression, we used Van Rooijen’s (1977) translation of Lubin’s (1965) Depression Adjective Checklist. This scale consists of a series of 12 positive and 22 negative emotion words (e.g., sad, lonely, healthy), to be checked by the subjects if they describe how one generally feels in everyday life. Previous validation studies of the instrument revealed good internal and external validity (Van Rooijen & Vlaender, 1984). The reliability of the scale in the current study was also satisfactory, with reliability coefficients (Cronbach’s α) of .80 at time one, and .83 at time two.

Parenting styles of father and mother: Care

The degree to which the subjects’ father and mother provided a warm, caring and loving upbringing was assessed retrospectively by asking the subjects to look back

upon the first sixteen years of their lives, and to judge their family situation as it was then. Specifically, they had to provide answers to three items of the Parental Bonding Instrument (PBI, Parker, Tupling & Brown, 1979). These items represented Parker *et al.*'s "care" dimension, with items being "appeared to understand my problems and worries", "was affectionate to me", and "did not understand what I needed or wanted" (with scores 1 "very like" and 4 "very unlike"). All three items had to be judged for father and mother separately, yielding two three-item scales. Despite the small number of items the reliability of these two scales was acceptable, with .73 for the mother's behaviors and .61 for the father's behaviors. These scales are available for time one only.

Locus of control

This concept was measured at both time points using a thirteen-item scale, with the items representing different aspects of their lives. For each aspect the subjects were asked to indicate to which degree they felt they could exert influence upon this aspect, e.g., the money they could spend, variation in life, and having good contacts with family and friends (1 = "I have no influence at all upon this aspect", 5 = "I have very much influence upon this aspect"). The reliability of this scale was .69 at time one and .75 at time two.

Table 1 presents the correlations among the variables, and the means and standard deviations. Comparison of the time one-time two scores on depression did not reveal significant differences between the time points, $T(641) = 1.75$, *ns*. The subjects experienced more care and support from their mothers ($M = 3.46$, $sd = .60$) than from their fathers ($M = 3.30$, $sd = .68$), $T(641) = 11.31$, $p < .001$. Finally, the subjects' locus of control seemed to shift towards the internal pole of the scale as they grew older, M 's were 3.72 ($sd = .50$) and 3.92 ($sd = .48$) for time one and time two respectively, $T(641) = -9.08$, $p < .001$.

Procedure

As a first step we examined whether the subject's gender affected the strength of the relations among the variables. Comparison of the variance-covariance matrices of boys and girls using structural equation modelling (Jöreskog & Sörbom, 1993) did not reveal significant differences between the two, χ^2 with 36 $df = 47.30$, $p > .05$. Therefore, it appeared that the effects of the style of upbringing were not dependent upon the subject's gender.

We proceeded by estimating the model presented in Figure 1. This model had no degrees of freedom and thus fitted the data perfectly. However, several of the effects included in that model were not significantly different from zero, and these effects were one by one omitted from the model. In examining the fit of the various models we considered the value of the chi-square test as well as Bentler and Bonett's (1980) Non-Normed Fit Index (NNFI). Monte Carlo-studies by Marsh, Balla and MacDonald (1988) showed that NNFI was the fit index that was the least sensitive to sample size among 30 well-used fit indices. Values of .90 and over indicate an

Table 1 Zero-order correlations among the variables used in this study, means and standard deviations (N = 642)

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) depression T1	1							
(2) depression T2	.44	1						
(3) age	.05	.02	1					
(4) gender	-.02	-.07	-.02	1				
(5) care mother	-.28	-.22	-.07	-.02	1			
(6) care father	-.29	-.21	-.12	.02	.70	1		
(7) loc. control T1	-.21	-.29	.13	.02	.05	.09	1	
(8) loc. control T2	-.17	-.32	-.11	-.04	.00	.11	.35	1
X	6.41	6.22	22.02	.49	3.46	3.30	3.72	3.92
SD	4.10	3.97	3.30	.50	.60	.68	.50	.48

NB. correlations of 1.081 and over are significant at $p < .05$. T1 refers to "time one", T2 to "Time two".

acceptable fit. The final model yielded a chi-square value of 3.90 with 7 df, $p = .79$, NNFI = 1.01. These values indicate that the model explains the relations among the variables very well, and that it cannot empirically be rejected.

RESULTS

Table 2 presents the standardized maximum likelihood-estimates for the final model. As one would expect, there was a rather strong effect of time one depression upon time two depression (.36, $p < .001$). Thus, it appeared that feelings of depression were rather stable across the four-year period observed here. The same applied to locus of control; here we found a time one-time two stability of .34 ($p < .001$).

Of more interest are the cross-lagged effects. We found that time one Depression had a small negative effect upon time two Locus of control ($-.09$, $p < .01$). Thus, it appeared that persons who felt depressive at time one felt also relatively less able to influence things around them at time two. Additionally, time one Locus of control had a negative effect upon time two depression ($-.21$, $p < .001$): people with an external locus of control were more likely to feel depressive at time two, controlling feelings of depression at time one.

Thus, it appeared that depression and locus of control mutually influenced each other during the observed time span of four years. However, the effect of locus of control upon depression was considerably larger and stronger than the reverse effect: an analysis where the cross-lagged effects were constrained to be equal to each other yielded an increase of 4.65 chi-square points with only 1 *df* extra, which is significant at $p < .05$. These effects are consistent with the notions outlined in the first part of this paper.

Table 2 Standardized LISREL maximum likelihood estimates for the final model (N = 642, χ^2 with 7 df = 3.90, $p > .50$, NNFI = 1.01)

	<i>depression T2</i>	<i>locus control T2</i>	<i>depression T1</i>	<i>locus control T1</i>
depression T1	.36***	-.09**		
locus control T1	-.21***	.34***		
age		-.14***		.15***
gender (hi=male)	-.07*			
care mother	-.11**	-1.15**	-.16**	
care father		.14**	-.18***	.11**
R^2	.25	.16	.18	.03

* $p < 0.5$, ** $p < .01$, *** $p < .001$.

Perceived Parenting Styles

The second aim of this study was to examine how perceived parenting styles affected feelings of depression and control. Table 2 shows that the more the subjects perceived their father's styles of upbringing as loving and caring, the more control they themselves experienced over their lives. This effect was found for both time points, e.g., it appears that the effect of the father's parenting style upon locus of control does not vanish after controlling the relations between these two variables at time one. Indeed, this effect is even slightly larger at time two (.14) than at time one (.11). Interestingly, whereas the effects of parenting style upon locus of control are positive for the fathers – as expected –, the results were rather different for the mothers parenting styles. Here we found no effect at time one, and a negative effect of $-.15$ ($p < .01$) at time two. It is probable that this negative effect is to some degree the result of a suppressor effect (the correlation between father and mother parenting style is .70; the correlation between mother parenting style and time two locus of control is very close to zero but positive rather than negative), but in any case this result suggests that a loving and caring education provided by the mother does *not* have the positive effects on locus of control found for the father's parenting style.

Regarding the subjects' feelings of depression, we found that a loving and caring style of parenting led to lower levels of depression. At time one both mothers and fathers style of parenting contributed to lower levels of depression (standardized effects of $-.16$, $p < .01$, and $-.18$, $p < .001$, respectively), whereas at time two only the mother's style of parenting was significantly related to feelings of depression ($-.11$, $p < .01$).

A slightly different way to look at the effects of father's and mother's style of parenting is to inspect the matrix of total effects of the independent upon the dependent variables (Jöreskog & Sörbom, 1993). E.g., Table 2 shows that the mother's parenting style directly affects feelings of depression at time two; however, there are also several *indirect* paths that connect these two variables (for example, a path that runs via time two one depression; and another running via time two to locus

Table 3 Total effects of the independent variables upon the dependent variables in the final model

	<i>depression T2</i>	<i>locus control T2</i>	<i>depression T1</i>	<i>locus control T1</i>
age	-.03**	-.09*		.15***
gender (hi=male)	-.07*			
care mother	-.17***	-.14**	-.16**	
care father	-.09***	.19***	-.18***	.11**

* $p < .05$, ** $p < .01$, *** $p < .001$.

of control, etc.). The total effects provide an estimate of the total effect of a particular independent variable upon a particular independent variable, that is, an estimate for the direct and the indirect paths taken together. Table 3 shows the matrix of total effects for the final model.

Concerning the subjects' feelings of depression, the total effects of father's and mother's parenting style upon time one and time two depression are rather similar. It appears that in general a loving and caring style of parenting leads to slightly lower levels of depression, irrespective of whether it is the father or the mother who provides the education. Stated differently, father's and mother's style of parenting contribute independently to their offspring's psychological health; despite the high correlation between father's and mother's style of parenting, their effects can statistically be separated from another.

With regard to the subject's locus of control, however, were found rather different effects of father's and mother's parenting styles. Whereas a loving and caring upbringing provided by the father seems to induce a shift towards an internal locus of control, a similar upbringing provided by the mother appears to result in an external control orientation. These effects were independent from the subject's gender, i.e., it was not the case that the effects of having received a loving and caring upbringing from the father were different for boys and girls.

CONCLUDING REMARKS

The current study sought to explore the relations among parenting styles, locus of control, and depression. We argued that parental involvement during the first sixteen years of the life of a child would lead to a shift towards having an internal locus of control. In turn, having an internal locus of control would be associated with/lead to lower levels of depressive feelings later in life, while the reverse effect – depressive feelings would lead to a shift towards the external pole of the locus of control dimension – would also hold. These three issues were addressed using longitudinal data drawn from a representative sample of 642 young Dutch adults. Using structural equation modelling, we fitted a model linking the aforementioned variables to each other. The results can be summarised as follows:

Regarding the effects of parental involvement upon locus of control, the expectation that involvement would lead to an internally directed control orientation was partially confirmed. We found that father's involvement was indeed linked to having an internal locus of control, at both time points. However, for mother's involvement we found the reverse effect upon locus of control, at time two only. Thus, it appears that there were differential effects of parenting style upon locus of control for mothers and fathers. One interpretation of this difference might be that fathers and mothers provide different types of involvement. E.g., involved fathers may encourage their offspring to be independent, to achieve, etc., while involved mothers may provide comfort when things go bad. We would expect that "encouraging" involvement would lead to increased feelings of control in the child, while a "comforting" involvement may not lead to such increased feelings of being in control. This interpretation would account for the pattern of results found here.

Parenting style was also related to feelings of depression, even after controlling locus of control. At both occasions we found that having had an involved parent – irrespective of the parent's gender – was associated with lower levels of depression. If the interpretation given above is correct – that is, the type of involvement provided by fathers and mothers is different – this result would mean, that both the "encouraging" and "comforting" style of parental involvement are about equally effective in reducing feelings of depression.

Additionally, the finding that parental involvement affects feelings of depression after controlling locus of control suggests that control orientation is not the only mediator of the relation between parenting styles and depression. One possible variable – that was not included in the present study – is coping style. It could be that subjects with involved parents possess a different (pro-active) style of coping with events than subjects with uninvolved parents. Indeed, talking to involved parents and receiving support from them may be considered just one way of coping with events: subjects with uninvolved parents are likely to choose a different mode of coping. Thus, it might be the case that the relation between parental involvement and depression is moderated by coping style.

Regarding the relations between depression and locus of control, we found empirical support for both hypotheses examined in this study. Whereas we found that feelings of depression indeed longitudinally affected locus of control – depressive persons were more likely to feel unable to influence the things that occurred to them —, the reverse effect was considerably stronger: persons who felt that they could influence things that happened to them were less likely to feel depressed. Again, this result supported our expectations.

Limitations of the study

The findings of this study should be considered descriptive and preliminary given the magnitude of the findings (the proportion of explained variance in the dependent variables is low, ranging from 3% to 27%) and the limitations of the data. Further validation of the instruments used here (especially our measure of locus of control, which was admittedly rather different from Rotter's [1966]

original conceptualisation) is imperative. Additionally, all variables were measured subjectively, while it would be desirable to have more objective measures of especially the parenting styles (e.g., by asking the subjects' fathers and mothers about the way they interacted with their child). Finally, although we tested some firm theory-based hypotheses, much of the evidence presented here is exploratory and needs to be confirmed by other studies. While these are obviously important limitations of the research reported here, results gained from this study might provide critical insights into the development of depression and the role of parents and psychological characteristics in this process.

The results, although preliminary and with limitations, have theoretical implications for counselling interventions with children and their parents. Specifically, parents should be educated about the importance of providing support to their children while they are navigating towards adulthood. Our results clearly underline the significance of parental support for the emotional and psycho-social development of children. Although the proportions of explained variance are relatively low, parental involvement was both cross-sectionally and longitudinally associated to lower levels of depression later in life. Thus, during counselling interventions with parents counsellors may rightfully stress the importance of parental involvement for the emotional development of children. Perhaps the most effective intervention would occur with parents long before their children reach the age of sixteen. Programs developed for parents might encourage parents to provide their children with support, care and involvement, with the hope of influencing their "inner resources" of coping effectively with situations that could induce feelings of depression.

In conclusion, our study underlines the importance of parental involvement for the development of the emotional and psycho-social resources their children need to cope effectively with situations that could lead to feelings of depression. Whereas locus of control seems one variable that mediates the relation between parenting styles and depression, other factors – especially coping styles – may be of equal or even more importance. Future – preferable longitudinal – research may shed more light on the relation between parenting styles and depression.

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