

Adult parent-child relationships: Relationship quality, support, and reciprocity

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in: *Applied Psychology: An International Review*,
54(3), 396-417. (2005)

A partir du modèle de la solidarité intergénérationnelle de Bengtson (Bengtson & Roberts, 1991), on a étudié, chez 265 femmes entre deux âges vivant en Allemagne, les interrelations entre leurs valeurs familiales, leur perception de qualité de la relation avec leurs parents, le soutien qu'elles disent leur apporter et recevoir de leur part, ainsi que leur appréhension de l'entraide entre les générations. On s'est aussi demandé si l'aide apporté aux parents et la réciprocité perçue étaient en rapport avec la charge que les filles ressentaient suite au soutien accordé. Les données des diverses rubriques, fournies par les sujets, ont été traitées avec des analyses de régression logistiques multiple et multinomiale. Les analyses ont débouché sur des liaisons positives entre les valeurs familiales, la qualité des relations et le soutien aux parents. La réciprocité perçue était reliée aux aides mutuelles entre les générations et un soutien déséquilibré avait des effets négatifs sur la qualité de la relation. La charge ressentie pouvait être prédite à partir de la réciprocité perçue et de l'importance de l'aide. Cependant, sont apparus des modèles corrélationnels spécifiques dépendant à la fois du type d'aide et du niveau d'importance relatif du père et de la mère. Les résultats sont discutés dans le contexte du sens de la réciprocité et des obligations familiales dans une culture occidentale.

In accordance with Bengtson's model of intergenerational solidarity (e.g. Bengtson & Roberts, 1991), the interrelations between adult daughters' family values, their perception of the relationship quality with their parents, the support they reported to give to and to receive from their parents, and their perception of reciprocity in intergenerational support exchange were investigated for $N = 265$ middle-aged women in Germany. It was also asked whether the support given to parents and perceived reciprocity are related to daughters' felt burden as a result of their support. Cross-sectional, self-report data were examined with multiple and multinomial logistic regression analyses.

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This research was supported by a grant from the Deutsche Forschungsgemeinschaft to the second author for the study "Value of Children and Intergenerational Relations" (TR 169/9-1/2; principal investigators: Gisela Trommsdorff, University of Konstanz and Bernhard Nauck, Technical University of Chemnitz, Germany).

The analyses revealed positive relations between family values, relationship quality, and support to parents. Perceived reciprocity was associated with the exchange of intergenerational support, and imbalance in support had negative effects on the relationship quality. Felt burden was predicted by the extent of support and the perceived reciprocity. However, specific correlational patterns depending on the kind of support as well as differences in the importance of mother and father occurred. The findings are discussed against the background of the meaning of family obligations and reciprocity in a Western culture.

INTRODUCTION

In all industrialised nations, the average life expectancy has increased. In Germany, a woman born today has an average life expectancy of 81 years and a man one of 75 years (United Nations Population Division, 2002). This demographic change affects families because the amount of lifetime parents and their children share has never been so great (Lauterbach, 1995). This has brought the adult parent–child relationship into the focus of recent research. Despite existing social insurance systems, the exchange of support remains important in the parent–child relationship throughout the whole life (Arber & Attias-Donfut, 2000). Representative studies from several Western countries underline the large amount of financial, instrumental, and emotional support that is given by parents to their adult children (e.g. Austria: Scholta, 1997; France: Attias-Donfut & Wolff, 2000; Germany: Kohli & Künemund, 2001; USA: Eggebeen & Wilhelm, 1995).

For the greater part of life, more support flows from parents to their children than vice versa, even in adulthood; this is especially true for financial support (Cooney & Uhlenberg, 1992; Rossi & Rossi, 1990). In Germany, 30 per cent of 55- to 69-year-old parents and 24 per cent of 70- to 85-year-old parents provided financial support to their adult children, but only 2–3 per cent of them received financial help from their children (Kohli & Künemund, 2001). With regard to other kinds of support, such as household tasks or emotional support, help from adult children more often equals or surpasses that of parents (Kohli & Künemund, 2001; Rossi & Rossi, 1990). The adult parent–child relationship is usually characterised by frequent contact and emotional closeness (e.g. Lye, 1996). Overt conflicts are rare (Fingerman, 2003). Against the background of these characterisations, the interrelations between family exchange and family relationships will be investigated more closely.

Following Bengtson's model of intergenerational solidarity (e.g. Bengtson & Roberts, 1991), the present study explores the question of how support given to parents is connected to norms and values of adult daughters and to the quality of the relationships between daughters and their parents. Another question is how reciprocity, the balance between give and take, is related to support and relationship quality. Although reciprocity is part of

the model and seems to be important for a deeper understanding of the support exchange in adult parent–child relationships, little research has been done on the relation between reciprocity in support exchange and other characteristics of adult parent–child relationships. Furthermore, in extension of the model of intergenerational solidarity, the felt burden of adult daughters resulting from the support given to parents is investigated. In particular, the questions studied concern the relations between burdens felt due to the support given to one's parents and the support given as well as the perceived reciprocity in the exchange of support.

Intergenerational support is a central aspect of the model of intergenerational solidarity put forth by Bengtson and colleagues (e.g. Bengtson & Roberts, 1991). The dimension of functional solidarity in the model includes exchange of support between parents and adult children and the reciprocity of this exchange. The exchange of support is assumed to be influenced by norms of familism (strength of commitment to familial roles and obligations) and affectual solidarity (the emotional quality of the relationship). According to the model, strong commitment to norms of familism and a close and positive relationship increases exchange of support. Several studies support this assumption: the adult child's norms of family obligations were positively associated with affective closeness, a positive relationship quality (Bengtson & Roberts, 1991; Silverstein, Parrott, & Bengtson, 1995), and with more support given to the parents (Ikking, van Tilburg, & Knipscheer, 1999). Affective closeness was related to more help provided by the child and to more help received from parents (Rossi & Rossi, 1990; Silverstein et al., 1995).

Following the assumptions of the model, the quality of the parent–child relationship is related to the exchange of support and the reciprocity of this exchange (or the lack of it) affects the quality of the relationship. A balance between help given to and received from parents increases the positive emotions felt and the quality of the relationship (Bengtson & Roberts, 1991; Roberts, Richards, & Bengtson, 1991). Reciprocity is considered as a universal norm in social relationships. The stability of social relationships is thus based on the expectation that the help and support given to another person will be reciprocated by this person in an adequate period of time and in a contingent way (Gouldner, 1960). Reciprocity among family members does not have to be of the same kind and can be established over the course of a lifetime in the way of "support banks" (Antonucci, 1985).

Even though the norm of reciprocity is not as important in family relationships as in other kinds of relationships, there is empirical support for the assumption that the norm of reciprocity applies to family relationships as well. For instance, studies on German samples confirmed that the majority of adult children, middle-aged parents, and grandparents experienced a balance of give and take in instrumental help and communication (Alt, 1994; Schulz, 1996).

In a representative US study, the percentage of reciprocated instrumental help was not as high as in the German studies, but in regard to emotional assistance the percentage of reciprocity was comparable (Kulis, 1992). In a study by Rossi and Rossi (1990), help given by parents and help given by children was highly correlated, which implies a substantial degree of reciprocity. Nevertheless, reciprocated help in kind was rare and observed only between adult daughters and their parents. This might be explained by the often reported stronger involvement of daughters in the relationship with their parents (Rossi & Rossi, 1990; Silverstein et al., 1995; Umberson, 1992). Other studies also confirmed the assumption of a "support bank", i.e. that reciprocity in family relationships can be established over a long period of time (Eggebeen & Hogan, 1990; Silverstein, Conroy, Wang, Giarrusso, & Bengtson, 2002).

Research on the association between reciprocity and the quality of the relationship with parents is still rare. In a study with older women, Rook (1987) showed a negative relation between imbalance in instrumental exchange and satisfaction in the relationship with their children but not for imbalance in companionship and emotional support. Reciprocated as compared to asymmetrical companionship was a better predictor for a higher relationship quality. Among blue-collar parents, help in the household, which was only provided by the parent and not reciprocated by the children, was related to lower parent-child relationship quality. For white-collar parents, financial help given by the parent, even if it was reciprocated, was negatively associated with parent-child relationship quality (Kulis, 1992). In a German comparison of intact, stepfather and single mother families, only in single mother families perception of an imbalance in exchange of support was related to more conflicts with the grandmothers (Schwarz, *in press*).

Social support has been regarded as highly protective and beneficial for the health and well-being of the recipient. Nevertheless, research on social support also points out that receiving support can have negative effects when it is accompanied by the provider's interference or the receiver's feelings of dependence and loss of autonomy (e.g. Leslie & Grady, 1988; Solky Butzel & Ryan, 1997). Positive as well as negative effects of social support have also been observed for the provider of support. Giving support can enhance the self-esteem and sense of reciprocity of the provider (Pierce, Sarason, Sarason, Joseph, & Henderson, 1996). However, giving support can also result in burden and distress. In a Swiss study on adult children, 77 per cent felt being alone with the support of their parents, and 80 per cent did not receive positive feedback for their support (Perrig-Chiello & Höpflinger, 2001).

The reasons for feeling burdened may include objective and subjective factors which might not necessarily be highly correlated. The extent of support can exceed the resources of the provider or can interfere with her/his other duties and roles. In its extreme form giving support may result in a burnout

syndrome with related loss of motivation to help and negative self-appraisal (Pines, 1982). According to stress theories, the felt burden strongly depends on internal processes such as the appraisal of the situation, the personal and environmental resources and constraints (Lazarus & Folkman, 1984; McCubbin & Patterson, 1983). Research on family caregivers showed that intergenerational support which is accompanied by feelings of guilt, anger, or anxiety negatively affects the caregivers' well-being and health (Brody, 1985; Bruder, 1998). Thus, internal evaluation of the support situation and the direction of intergenerational transfers seem to be important influencing factors for felt burden. As part of the social contract in Western societies, the perception of not meeting the norm of reciprocity induces feelings of guilt or feelings of inequity (Johnson, Danko, Darvill, & Nagoshi, 1992). This in turn may increase the felt burden as a result of providing support. Another explanation why perceived imbalance might be related to feelings of burden is that having norms of reciprocity not be met could undermine one's belief in a just world (Montada & Lerner, 1998), and this in turn may result in feelings of anger and lowered self-esteem. To summarise, felt burdens due to giving support have to be seen within the complex processes of intergenerational relationships, including exchange of support and related feelings of injustice and distress (cf. Trommsdorff, in press).

Based on this review, the aim of this study was to investigate adult daughters' perspectives with regard to the quality of their relationship with their parents, intergenerational exchange of support, and the reciprocity of this exchange. First, we expected that family values and relationship quality would be positively related to adult daughters' reports on the support they give to their parents. More precisely, we asked whether the relationship quality with mothers and fathers are of similar importance for the adult daughters' reports on the extent of given support. Furthermore, we expected that the relationship quality would be more important than values for providing emotional support, and that family values are more important for giving instrumental and financial support. Second, we investigated how the daughters' reports of support given to parents and received from parents is related to the reciprocity they perceive. Bengtson and Roberts (1991) posited that perceived reciprocity is a function of objective patterns of support. They point to the fact that the individual perception is a result of a complex calculation of different kinds of support over a long period of time. Thus, we wanted to explore what kind of support is relevant for the perception of reciprocity, and whether the extent of support given, the extent of support received, or the difference between these two is most relevant for the judgment of perceived reciprocity. Third, we expected that a lack of reciprocity (in both directions) has negative effects on the relationship quality. Fourth, we hypothesised that the felt burden of the daughters is affected by the extent of support provided and by the perceived reciprocity.

METHOD

Participants

The present study is part of the cross-cultural study "Value of Children and Intergenerational Relations" (see Trommsdorff & Nauck, 2001). Similar proportions of the German data were collected in three different locations: a middle size university town in East Germany (Chemnitz), a middle size university town in Southern Germany (Konstanz), and a large city from an urbanised industrialised region in North-Western Germany (Essen). The present study is based on a sample of 313 women with 14–17-year-old children. Since the study referred to the current relationship of the women with their parents, only women with at least one parent still alive were included in the following analyses ($N = 265$). The mean age of the women was 42.98 ($SD = 4.50$, range 33–56 years), and they had between one and five children ($M = 2.25$, $SD = .82$).

The majority of the women were married (89%), 8 per cent were remarried, and 3 per cent were cohabiting. All women completed secondary school, 16 per cent on the lowest school track ("Hauptschule"), 47 per cent on the middle school track ("Mittlere Reife"), and 36 per cent on a college bound track. Twenty-five per cent of the women had a university degree, and 68 per cent had finished vocational training. Only 7 per cent of the women were without any vocational training. Most of the women worked part-time (51%), only 30 per cent full-time, and 19 per cent did not have a paid job.

The percentage of full-time employed women is only slightly higher than the proportion of full-time employed, married women with children in 1996 in Germany (23%) (Bundesministerium für Familie, Senioren, Frauen und Jugend [BMFSFJ], 1998). This might be explained by the age of women's children in this study. The women who participated in this study all had adolescent children, and in Germany, the percentage of employed women increases with the age of their children. Furthermore, the sample is biased towards higher education; among women of the same age in Germany only 16 per cent finished school on a college bound track (Statistisches Bundesamt, 1998).

For 58 per cent of the women both parents were still alive; in 35 per cent of the cases only the mother was living and in 7 per cent only the father was still alive. The mean age of the fathers was 70.63 ($SD = 6.56$), and the mean age of the mothers was 70.00 ($SD = 6.73$). The women had frequent contact with their parents (personal or by phone and mail): 59 per cent had contact with their mothers at least several times a week (41% with father), and only 6 per cent had contact less than once a month with the mother (12% with the father). None of the women lived together with the father in the same household, and only two lived in the same household with the mother.

Thirty-five per cent of the mothers and 32 per cent of the fathers lived not more than 15 minutes away. Twenty-eight per cent of the mothers and 25 per cent of the fathers lived in the same district/city, 34 per cent of the mothers and 41 per cent of the fathers in another part of the country and 2 per cent of the mothers and of the fathers in another country. Health status influences parents' need for help as well as their ability to provide help (Eggebeen & Wilhelm, 1995). According to the reports of the daughters, 75 per cent of the parents had never needed care, 14 per cent needed care in the past, and only 11 per cent needed care at the time of the interview.

Procedure

The standardised face-to-face interviews were carried out by trained interviewers for each person individually. Each interviewee answered all the questions in the assigned sequence. A small gift was presented at the end of the interview.

Measures

Self-reports of the adult daughters were assessed for the variables described below. Two variables were included as control variables: distance between daughters' and parents' residence, and parents' age. It was expected that residential distance (indicated on a scale from 1 = "in your home" to 6 = "abroad") would affect the provision of instrumental support, while parents' age was used as a proxy of parents' need of support.

Interdependent Self. A short version of Singelis' (1994) Self-Construal Scale was used after modification of wording to make items refer to the respondents' family (e.g. "It is important to me to respect decisions made by my family"). Participants indicated on a 5-point scale how strongly they disagreed (1) or agreed (5) with the statements. The reliability of this 5-item scale was $\alpha = .74$.

Expectations of a Grown-up Child. Based on an open question from the original Value of Children Study (Arnold, Bulatao, Buripakdi, Chung, Fawcett, Iritani, Lee, & Wu, 1975) a standardised instrument was developed and tested in the pilot study, which was again slightly modified for the main study. The instrument consists of two parallel 7-item scales assessing expectations of a grown-up daughter ($\alpha = .78$) and of a grown-up son ($\alpha = .74$) (e.g. "[...] that she continues living close to you"; "[...] that he provides financial assistance to you"). All items were rated on a 5-point scale (1 = "Not at all" to 5 = "Quite a lot"). Due to the high intercorrelation of the scales ($r = .95$), they were combined; the mean of both scales was used for further analyses.

Relationship Quality. Three indicators of quality of the relationship with separate assessments of the relationship with the mothers and fathers were used. Two were adopted from the Network of Relationships Inventory (NRI; Furman & Buhrmester, 1985): *intimacy* (e.g. "How often do you tell your mother/father everything that is on your mind?") (reliabilities were .85 and .78 for mothers and fathers, respectively) and *admiration* (e.g. "How often does your mother/father let you know that you are good at many things?") ($\alpha = .87$ for both parents). The respondents rated three items of intimacy and admiration, respectively, on a 5-point scale (1 = "never" to 5 = "always"). Additionally, *emotional closeness* was assessed with one item, again with separate assessments for the relationship with mother and father (4-point scale ranging from 1 = "not close at all" to 4 = "very close").

Social Support Between Adult Daughters and their Parents. This instrument included questions concerning social support and was developed in the pilot study. Both *help given to parents* as well as *help received from parents* in the last 12 months were assessed without separating into support to/of mother and father. Three kinds of support were assessed. Financial support was measured with one item ("Please tell me how often you have given your parents financial support in the last 12 months"). The scale of instrumental support consisted of three items which refer to household chores, helping with official business, and taking care in times of illness (e.g. "How often have you done chores like shopping or housekeeping for your parents in the last 12 months?"). The three items of the indicator of emotional support comprised giving advice, comforting parents, and talking about their worries (e.g. "How often have you tried to comfort your parents in the last 12 months?"). Again, all items were rated on a 5-point scale (1 = "Never" to 5 = "Always"). Internal consistencies were high to moderate for instrumental and emotional support given to parents ($\alpha = .81$ and $\alpha = .83$) as well as for emotional support received from parents ($\alpha = .85$), but were not satisfying for instrumental support received from parents ($\alpha = .53$). Furthermore, the degree of *felt burden* caused by the support given to the parents was assessed for each sub-dimension with one item (1 = "No burden at all" to 5 = "Very heavy burden").

One further question assessed the *perception of reciprocity* between the help given and received on a 5-point scale from "I get much more than I give" (1) to "I give much more than I get" (5) (Schwarz, in press), which was assessed as a judgment across all three sub-dimensions of social support. For further analyses the scale values 1 and 2 were pooled to form the category "daughter receives more", values 4 and 5 were pooled to form the category "daughter gives more", and the scale value of 3 formed the category "reciprocity" as it represented the middle point of *balanced support* on the original 5-point scale. One hundred and eighty-nine women fell into the latter category and rated the help-exchange as reciprocated; 42 had the

feeling that they had received more than given, and 30 women felt that they had given more than they received. The categorical indicator of perceived reciprocity was dummy-coded with the reciprocity group as the reference group. The dummies indicated the comparison with the “daughter receives more” group and with the “daughter gives more” group, respectively.

RESULTS

The Relation Between Family Values and Relationship Quality and the Support the Adult Daughters Report Giving to Parents

The effects of the three indicators of relationship quality and of the family values were analysed separately for the relationship with mother and father. Multiple regression analyses on daughters' reports on emotional, instrumental, and financial support given to parents were conducted with the control variables residential distance and age of the respective parent, the family-related values of interdependence and expectations from an adult child, and the relationship characteristics intimacy with, perceived admiration of, and closeness with the respective parent. A summary of the analyses is documented in Table 1.

With respect to the analyses involving the relationship with the mother, the larger residential distance, the more likely was emotional support given, and the less likely instrumental support given. The unexpected positive relation with emotional support was only observed after controlling for family values and relationship quality (bivariate correlation: $r = .09$). The older the mothers, the more emotional and instrumental support adult daughters gave to their parents.

The regression analysis predicting daughters' reports on emotional support showed that the higher the interdependence and the expectations of family duties of adult children, and the higher intimacy and closeness in the relationship with the mother, the more emotional support the daughters gave to their parents. However, the effects of interdependence and intimacy only reach significance at a trend level. A very similar pattern was found for instrumental support. The higher interdependence and the expectations of family duties of adult children, and the higher the perceived admiration by the mother, the more instrumental support the daughters gave to their parents. No effects occurred in the prediction of financial support.

A comparison of the standardised regression coefficients indicates that family values and relationship quality were of equal importance for emotional support. With respect to instrumental support, only the indicators of family values were significantly related to support given to parents. This was in line with the expectation that instrumental support is more influenced by family values than by relationship quality.

TABLE 1
Multiple Regression Analyses Predicting Support Given to Parents With Control Variables, Family Values, and Relationship Quality, for Relationship With Mother ($N = 233$) and With Father ($N = 162$)

	<i>Support given to parents</i>								
	<i>Emotional^a</i>			<i>Instrumental^b</i>			<i>Financial^c</i>		
	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β	<i>B</i>	<i>SE B</i>	β
Residential distance	.12	.05	.17**	-.18	.05	-.20**	.00	.02	.02
Mother's age	.02	.01	.17**	.04	.01	.29**	.00	.00	.05
Interdependence	.18	.10	.11+	.31	.12	.16**	-.02	.04	-.04
Expectations	.26	.09	.18**	.22	.10	.13*	.02	.03	.05
Intimacy (M)	.15	.08	.16+	.08	.09	.07	.03	.03	.10
Admiration (M)	.05	.08	.05	.16	.09	.13+	.01	.03	.03
Closeness (M)	.17	.08	.16*	-.04	.10	-.03	-.02	.03	-.05
	<i>Emotional^d</i>			<i>Instrumental^e</i>			<i>Financial^f</i>		
Residential distance	.09	.06	.11	-.21	.06	-.27**	.01	.02	.06
Father's age	.02	.01	.15+	.05	.01	.33**	.00	.00	.06
Interdependence	.19	.12	.12	.21	.12	.13+	-.04	.04	-.09
Expectations	.18	.12	.13	.06	.11	.04	.02	.04	.06
Intimacy (F)	.21	.13	.16	.21	.12	.15+	.01	.04	.02
Admiration (F)	-.04	.10	-.04	-.01	.10	-.01	.01	.03	.05
Closeness (F)	.11	.09	.12	.00	.09	.00	-.04	.03	-.13

Note: M = mother, F = father.

^a $R^2 = .20$, ^b $R^2 = .23$, ^c $R^2 = .01$, ^d $R^2 = .12$, ^e $R^2 = .24$, ^f $R^2 = .03$.
+ $p < .10$, * $p < .05$, ** $p < .01$.

With respect to the analyses including the relationship with the father as an independent variable, residential distance was negatively related to instrumental support, but not with the other two kinds of support. Concerning fathers' age, the older the fathers, the more emotional and instrumental support was provided by daughters. Compared with the analyses involving the relationship with the mother, only one effect of family values on daughters' report on instrumental support (significant at the $p < .10$ level) was found. However, if the analyses were conducted without indicators of the relationship quality, the effects of the value indicators in this smaller sample were very similar to those reported above. We found a marginally significant relation between intimacy with father and the instrumental support that was reported by the daughters. Again, neither the control variables, nor the family values, nor relationship quality were related to financial support.

Comparing these results with the analyses of indicators of the mother–child relationship, we can conclude that emotional and instrumental support to parents were better explained by the quality of the relationship with the mother than with the father.

Relation Between Exchange of Intergenerational Support and Perceived Reciprocity

Multinomial logistic regressions were conducted to predict the likelihood of belonging to one of the imbalanced groups (“daughter receives more”, “daughter gives more”) compared to the balanced group, by daughters’ report on the extent of emotional, instrumental, and financial support given to parents and received from them. Additionally, the difference score of support given minus support received was analysed as a predictor of the reciprocity groups.

As documented in Table 2, the support daughters gave to parents as well as the support the daughters received from parents predicted the association with the reciprocity groups. The more emotional and financial support

TABLE 2
Multinomial Logistic Regression Analyses Predicting Perceived Reciprocity With Support Given, Support Received, and the Difference Between Support Given and Support Received ($N = 259$)

		<i>Perceived reciprocity</i>					
		<i>Daughter receives more</i>			<i>Daughter gives more</i>		
		<i>B</i>	<i>SE B</i>	<i>Wald</i>	<i>B</i>	<i>SE B</i>	<i>Wald</i>
Support given to parents	Emotional	-.53	.34	2.50	.82	.31	6.99**
	Instrumental	-.59	.31	3.71+	.41	.23	3.36+
	Financial	-1.69	1.34	1.60	1.60	.61	6.85**
Support received from parents	Emotional	.35	.32	1.21	-1.30	.42	9.46**
	Instrumental	1.95	.43	20.89**	-1.09	.89	1.51
	Financial	.14	.23	.35	-.22	.43	.25
		<i>Daughter receives more</i>			<i>Daughter gives more</i>		
Support given – support received	Emotional	-.38	.27	1.91	.93	.27	11.89**
	Instrumental	-1.11	.30	13.96**	.42	.20	4.60*
	Financial	-.32	.20	2.56	.80	.37	4.61*

Note: The dependent variable was designed to include the two categories, *daughter receives more support* and *daughter gives more support*; both are contrasted with the category *balanced support*.
+ $p < .10$, * $p < .05$, ** $p < .01$.

daughters gave, the more likely they were to belong to the “daughter gives more” group. The effect of instrumental support to parents was only significant at the $p < .10$ level, but in the same direction. Additionally, the higher the emotional support the daughters received from the parents, the less likely they were to belong to the “daughter gives more” group. The latter effect seems to be the strongest predictor.

In predicting the likelihood of belonging to the “daughter receives more” group only one significant effect was found. The more instrumental support the daughters received, the more likely they were to belong to the “daughter receives more” group. Another effect, which was marginally significant, indicated that the more instrumental support the daughters gave, the less likely they were to belong to the “daughter receives more” group.

The analysis of the difference scores revealed very similar results. The more that instrumental support to parents exceeded the support from parents, the less likely daughters were to belong to the “daughter receives more” group. The more that emotional, instrumental, and financial support to the parents exceeded the support from the parents, the higher the likelihood that daughters belonged to the “daughter gives more” group. With respect to the difference scores, again emotional support was the strongest predictor.

Thus, even though there was an overlap of the actual given and received support and the subjective evaluation of reciprocity, parts of the variance of the subjective indicator have not been explained. With respect to daughters' reports on differences between actual support given and received and their subjective evaluation, some actually and subjectively gave more support (true imbalance group), others actually gave more but subjectively reported balance or receiving more (underestimator group), and some who actually did not give more nevertheless had the feeling of giving more (overestimator group). One hypothesis is that the latter group differed from the other two groups with respect to higher stress through other obligations. Number of children and a larger distance between daughter and parents were particularly regarded as stress factors of instrumental support but may also play a role for emotional support (e.g. Kaufman & Uhlenberg, 1998; Umberson, 1992). Higher engagement in employment provides on the one hand more resources for financial support, and restricts on the other hand the time for instrumental and maybe emotional support. Another hypothesis is that the underestimator group holds stronger family oriented values.

For each kind of support the three groups were compared. However, only few significant differences occurred with respect to additional stress. The women of the true-balance group (in instrumental support) had more children ($M = 3.00$, $SD = 1.22$) than the women of the underestimator ($M = 2.1$, $SD = .57$) and overestimator groups ($M = 1.72$, $SD = .59$), $F(2, 45) = 10.23$, $p < .01$. Both over- and underestimators of financial support were less often unemployed (15% and 14%, respectively) compared to the true-balance

group (42%). However, a higher proportion of the overestimators was employed full-time (41%) compared to underestimators (27%) and the true-balance group (32%). This is in line with the assumption that particularly in regard to financial support one should expect that providing money to the parents is less stressful for employed daughters. In sum, the analyses did not support the hypothesis that the overestimators are characterised by higher stress accompanying the provision of support.

With respect to family values, again only few significant differences were observed. In terms of emotional support, the true-balance group showed higher expectations of adult children ($M = 2.75$, $SD = .90$) than underestimators ($M = 2.00$, $SD = .58$) and overestimators ($M = 1.83$, $SD = .48$), $F(2,57) = 8.63$, $p < .01$. For instrumental support, the true-balance group tended to report higher interdependent orientation ($M = 4.08$, $SD = .33$) than the underestimator group ($M = 3.57$, $SD = .45$) and were similar to the overestimator group ($M = 3.91$, $SD = .53$), $F(2, 49) = 3.05$, $p < .10$. The few significant results point to a higher orientation towards family values of the true-balance group compared to the other groups.

The Relation Between Perceived Reciprocity and Relationship Quality

Multiple regression analyses for predicting relationship quality by perceived reciprocity were conducted separately for the three aspects of relationship quality and for the relationships with mother and father. Daughters who thought that they gave more support than they received reported less intimacy ($\beta = -.21$, $p < .01$) and less closeness with their mothers ($\beta = -.16$, $p < .05$) and felt less admired by their mothers ($\beta = -.16$, $p < .05$). With respect to the quality of the relationship with the father, reciprocity did not play a role. Thus, our expectations were confirmed for the relationship with the mother but not for the relationship with the father.

The Relation Between Support to Parents, Perceived Reciprocity, and Felt Burdens of the Daughters

Multiple regressions were conducted to predict daughters' reports on felt burden through emotional, instrumental, and financial support to parents by the extent of the respective support as well as the dummies of perceived reciprocity as predictors. These analyses were also conducted with the control variables residential distance and parents' age. The results were very similar to those without the control. Since the inclusion of age of mother and father reduced the sample to daughters with both parents still alive, we decided to report the analyses without taking into account the control variables.

The more support the daughters reported giving to their parents, the more they felt burdened by the support. This was true for all three kinds of support (emotional: $\beta = .38$; instrumental: $\beta = .52$; financial: $\beta = .44$; $ps < .01$). Additionally, if the daughters thought that they gave more than they received, they reported a greater burden than the other women. Again, this was shown for daughters' report on burden as a result of emotional ($\beta = .40$, $p < .01$), instrumental ($\beta = .28$, $p < .01$), and financial support ($\beta = .14$, $p < .05$). A trend was also found, indicating that daughters who thought that they received more than they gave reported fewer burdens due to emotional support ($\beta = -.10$, $p < .10$). In sum, the extent of support to parents and the perceived imbalance of support contributed to the felt burden of the daughters. Among the imbalanced groups it was the feeling of giving more that increased the felt burden consistently, while the effect of feeling one received more than one gave was weak. Comparing the standardised regression coefficients, it seems that burden through emotional support was equally affected by extent of support and perceived reciprocity. However, felt burden through instrumental and financial support was better predicted by the extent of the respective support than by perceived reciprocity.

DISCUSSION

The results of the present study largely confirmed the expectations of the model of intergenerational solidarity and the expectation with respect to felt burden. Additionally, the results underline relationship-specific and support-type-specific patterns of relations.

The Relations Between Daughters' Family Values, Relationship Quality, and Support to Parents

The expectations derived from the model of intergenerational solidarity, namely that adult daughters' family values and relationship quality are positively related to the extent of support given to their parents, were only partly confirmed. Family values and quality of the relationship with the mother but not with the father predicted emotional support to parents. The effects of values and relationship quality on emotional support given to parents were of comparable size. With respect to instrumental support, family values were the only significant predictors. The stronger association of intimacy and closeness in the relationship with the mother and emotional support, as compared to the associations with instrumental support, may be a result of the strong overlap of the three concepts: intimacy, closeness, and emotional support. Provision of instrumental support was only marginally affected by admiration from the mother. However, emotional and instrumental support were affected by the values concerning obligations of adult

children and the interdependence of family members. With respect to financial support, neither family values nor relationship quality were important. We can only speculate that in cases where money is provided for parents, this is largely the result of the specific need of the parents, independent of the effects of values and relationship quality.

As mentioned above, the analyses only revealed significant results for aspects of the relationship with the mother, while the effects of relationship with the father reached only trend levels. Nevertheless, the regression coefficients of this smaller sample were of comparable size. The explained variance for emotional support to parents was slightly higher in the analysis including mother variables. In the analyses of instrumental support, the explained variance was higher for the analysis with father variables, but this was attributed to the control variables. We can conclude that the differences between the relationship with the mother and the father were not striking, but the quality of the relationship with the mother was slightly more important with respect to the extent of support the daughters gave to their parents.

Reciprocity as a Function of Support Exchange

Even though reciprocity is part of the model of intergenerational solidarity, its role in the model has rarely been investigated. Therefore, a main goal in the present study was to include this aspect, as a subjective judgment of the adult daughters rather than as an “objective” assessment of the extent of help given and received. The analyses of the relation between support and perceived reciprocity showed that perceived reciprocity is a function of the exchange of support but cannot completely be explained by this variable. Belonging to the “daughter gives more” group was better predicted by support exchange than belonging to the “daughter receives more” group.

The emotional support given and the emotional support received were both strongly related to the likelihood of belonging to the “daughter gives more” group but in opposite directions; the difference between emotional support given and received was the strongest predictor for the daughters belonging to this group. Thus, it seems that emotional support given and received is the most important factor for the subjective evaluation of reciprocity, at least in regard to the judgment whether one gives more. Besides emotional support, financial support plays an important role for the judgments of the daughter with respect to reciprocity, even though financial support was seldom given to parents and was not related to relationship quality. Thus, providing an unusual type of support, which may also strain one’s own resources, can induce feelings of injustice.

Daughters’ perceptions of having received more than they give were only predicted by instrumental support. The more instrumental support the daughters received from parents or the more this support received from

parents exceeded the instrumental support given to parents, the higher the likelihood that the daughter perceived herself as receiving more.

However, a high proportion of the perception of reciprocity remains unexplained. We conducted additional analyses to understand how the adult daughters evaluate imbalance. It seems that additional stressful circumstances do not play an important role in explaining why daughters who objectively do not provide more support than they received nevertheless feel as if they do. High family values are related to a higher consistency in the perception of the support exchange. The further analyses in this study indicate that those adult daughters who believe they give more differ from the other groups with respect to their evaluation of the relationship quality and their support-related felt burdens. In sum, this points to an overall relationship dissatisfaction on the part of those daughters, particularly in their relationship with the mother. Further analyses should include other aspects such as daughters' life-satisfaction (general and with regard to family) to advance our understanding of perceived reciprocity.

Reciprocity as a Predictor of Relationship Quality

Our expectation that lack of reciprocity was associated with a lower quality of relationship with the parents was only confirmed for the relationship with the mother and only with respect to one kind of imbalance, namely, when the daughter gives more. This perception of the daughters that they give more than they receive induces deterioration in intimacy and closeness with the mother and also in the perception of her admiration of them. The results are in line with the often observed closer relationship between adult daughters and mothers as compared to the relationship with the father (Umberson, 1992). Daughters may expect a balanced relationship with mothers more than with fathers. But why does only the perception of giving more affect the relationship quality? According to Blenkner's (1965) concept of filial maturity, children have to face a filial crisis in middle adulthood in which they must overcome their role as a child and have to mature into an independent adult who can accept his/her responsibility for the elderly parents instead of expecting ongoing support from the parents. Thus, the adult children must develop further autonomy (Nydegger, 1991). We can only speculate whether the adult daughters in this study have not yet negotiated the filial crisis and that therefore their perception of giving more to the parents than they receive does not fit their conception of the parent-child relationship where parents have to support their children. In accordance with this interpretation, Lang and Schütze (2002) found that filial autonomous as compared to filial dependent adult children provide in general more instrumental support and, specifically, more care for parents when they need it.

The perception of giving more than receiving was related to relationship quality, but this was not the case for the perception of receiving more than giving. The “support bank” hypothesis (Antonucci, 1985) can explain the lack of a relation. Children do not need to reciprocate the parental support immediately; instead, they believe that they will reciprocate this support in the long run. Thus, a present imbalance with the parents giving more than receiving does for them not breach the norm of reciprocity. Therefore, even in adulthood the parent–child relationship seems to remain more asymmetrical than other social relationships, including the norm that parents usually give more to their children than they receive as long as they are in good health (see also Fingerma, 2003).

The effects of reciprocity on relationship quality were substantial but small, as can be seen by the explained variance in the analyses (for relationship with the mother $R^2 = .03-.05$; for relationship with the father: $R^2 = .01-.02$). This is in line with other studies that also revealed small effects or found significant effects only in specific subgroups (Kulis, 1992; Rook, 1987; Schwarz, in press).

To summarise so far, it seems that a positive relationship with parents leads to more support provided by the daughter. This can increase the likelihood that the daughter believes that she has given more than she received, particularly when the discrepancy between emotional support given and received was high. If the daughters perceive an imbalance, believing that they have given more, then deterioration in the relationship quality can result.

Felt Burden as Another Indicator of the Subjective Processing of the Support Situation

The analyses showed that the felt burden was related to the adult daughters’ reports as to the support they provide (as a proxy of an objective measure) as well as their perception of giving more than receiving. Nevertheless, the relation between both predictors differed as a function of the kind of support investigated. Burden through emotional support was predicted almost to the same degree by actual support and by perceived reciprocity. However, with respect to burden as a result of instrumental or financial support the extent of both types of support was the stronger predictor. The restricted resources of time and money are needed to provide instrumental and financial support, whereas resources of emotional support are more far-reaching and without clear boundaries.

We can conclude that even the provision of social support to parents within a usual range (most of the parents were in good health) is related to heightened feelings of burden. It is striking that the provided emotional support is on the one hand positively related to closeness with the mother and on the other hand positively related to felt burden through this support.

These seemingly contradictory results might reflect a strong ambivalence in the adult parent–child relationship (Lüscher & Pillemer, 1998). Intergenerational relationships are predisposed for ambivalence due to the closeness and interdependency of the family members, the simultaneousness of continuity and change in this kind of relationship, and because of the conflicting demands of modern societies (Lüscher, 2004). Thus, the support an adult daughter provides can result in simultaneously positive and negative outcomes for them. This interpretation is in line with Fingerman's findings (2003) that for half of the interviewed adult daughters in her study, even the descriptions of enjoyable events with their mothers contained negative aspects.

Feelings of inequity also contribute to felt burden. While the subjective judgment of reciprocity was related to the relationship quality and felt burden was not (highest bivariate correlation: $r = -.13$), further research should investigate the impact of felt burden on the well-being of the daughters.

Caveats and Conclusions

There are several limitations of the present study. Most importantly, the present data are cross-sectional in nature, thus precluding definitive conclusions with regard to causality. Longitudinal data would allow for more substantial inferences concerning the causal path from relationship quality to exchange of support, from exchange of support to perceived reciprocity, and in turn from reciprocity back to relationship quality. Moreover, here we can only rely on the report of the adult daughters. Since the data of the Value of Children study allow the inclusion of the mothers' perspective as well (but only for a smaller sample of 100 mother–daughter dyads), these data will be part of further analyses.

The inclusion of mothers' report would allow investigation of whether the associations between relationship quality, values, intergenerational exchange, and reciprocity described in this study are stable or based on a bias in the report of the daughters. Additionally, these analyses would consider the interdependence between mothers and daughters which may influence the results. The analyses would also allow a deeper insight into the nature of reciprocity in family relationships. According to Ikking et al. (1999), adult children overestimate the support they give to their parents as compared to the reports of their parents on support from children but both sides report that the parents receive more support than they give. However, first analyses of the Value of Children study which refer only to emotional support given by the parents showed no intergenerational difference (Trommsdorff & Schwarz, 2003).

Nevertheless, the present study provides insight into several aspects of the support process between adult daughters and their parents in a large sample in Germany. Values and the relationship quality play an important role for

the support given to parents, and feelings of inequity, which are connected to the support exchange, can have a negative impact on the relationship with parents and the experienced burden of the daughters. Analyses of the data from a pilot study point to a different meaning of reciprocity in a traditional, collectivistic culture like Indonesia (Schwarz, Trommsdorff, & Chakkarath, 2004). Therefore, further analyses will investigate whether the patterns found for a Western culture (Germany) can be replicated in other cultures where family obligations are of higher importance and the norm of reciprocity has a different meaning.

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