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SHORT COMMUNICATION

Working conditions, adverse events and mental health problems in a sample of 949 German teachers

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Abstract
Objectives: The aim of this study was (1) to explore in detail the working load of teachers, (2) to analyse the extent of negative or threatening school-related events teachers are confronted with, and (3) to evaluate mental health strain by applying the general health questionnaire (GHQ).
Methods A sample of 949 teachers in 10 grammar schools (German: Gymnasien) and 79 secondary modern schools (German: Hauptschulen) was investigated applying (1) a questionnaire covering different aspects of the occupational burden and threatening school-associated events and (2) the general health questionnaire (GHQ-12).
Results Based on what teachers indicated in the questionnaire, full-time teachers work more than 51 h weekly. More than 42% of our sample indicated verbal insults, almost 7% deliberate damage of personal belongings, and 4.4% threat of violence by pupils during the past 12 months. When applying the GHQ-12, we found that 29.8% of the sample report significant mental health problems. With respect to school types, teachers in secondary modern schools indicated more of such problems, while no effects regarding age, gender, or full/part-time teaching were observed.
Conclusions To be a teacher is a hard work and requires coping of considerable amount of adverse events. Based on the GHQ, nearly 30% of teachers suffer from significant mental health problems.

Keywords Teacher · Burn out · Health conditions · Occupational burden · Violence

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Introduction

During the past years, mental ill health among teachers has become an increasing problem in many countries (Clark Carlson and Thompson 1995; Friedman 1991; Guglielmi and Tatrow 1998; Schwarzer et al. 2000; Travers 2001; Maslach and Jackson 1984; Schaarschmidt 2004; Bauer et al 2005). Rates of premature retirement among German school teachers due to serious health disorders are consistently higher than those of other employees in public services. Psychiatric and/or psychosomatic disorders are the leading causes of premature retirement of teachers (Weber et al. 2004, 2006; Weber and Lederer 2006). In order to be able to apply suited preventive measures, there is an obvious need to analyse the strain felt by teachers still in their jobs.

Teachers feel strained by large classes, pupils' behaviour, high workload, frequent changes in the education system, by their low occupational image, and lack of support from colleagues and school heads (Rudow 2002; Maslach and Jackson 1984). Factors such as general workload, class size, and pupil misbehaviour were consistently described as influencing the ill health of teachers (Yoon 2002; Schaarschmidt 2004; Heyse et al. 2004; van Dick and Wagner 2001; Kyriacou 2001; Abel and Sewell 1999; Boyle et al. 1995). Surprisingly, quantitative data about how much teachers work, what teachers do, and what causes their professional strain are rather sparse.

In this study, it was our intention (1) to quantify the actual working load of teachers (with a special focus on work besides teaching in the classroom); (2) to quantify adverse events that teachers experience by pupils or their parents; and (3) to describe the mental health strain of teachers by applying the GHQ, an internationally established questionnaire. We conducted our study in three districts (German: Schulbezirke) in and around Freiburg, a medium-sized city in the southwestern part of Germany. We included all teachers in the following two German school types: (1) "Gymnasien" (according to the British nomenclature "grammar schools"), i.e. schools qualifying for the access to a university) and (2) "Hauptschulen" (according to the British nomenclature "secondary modern schools"), i.e. schools leading to the lowest of all school qualifications.

Materials and methods

This is a cross-sectional study. The study is part of a project entitled "Health Promotion for Teachers", which is supported and supervised by the "Bundesanstalt für Arbeitsschutz und Arbeitsmedizin", the latter being an agency of the German Federal Ministry of labour.

For a detailed description of the sample see Unterbrink et al. (2006). The study sample consisted of 949 teachers (426 from Gymnasien, 523 from Hauptschulen) who had returned filled-out questionnaires. The sample represented 38.2% of a total of 2,484 teachers to whom the questionnaires had been sent. The mean age was 48.9 years, and 64.0% were females. We arbitrarily defined teachers working 75% and less as part-time workers. The proportion of part-time teachers amounted to 34.5%, the rest worked full-time (for further details see Table 1 in Unterbrink et al. (2006)).

Inventories

The questionnaires delivered to the teachers consisted of the following components: (1) questions covering sociodemographic data; (2) questions related to their professional history and actual working conditions (full-time/part-time occupation; time spent on duties in addition to teaching lessons; experiences of verbal or physical violence by pupils or their parents); (3) the "General Health Questionnaire 12", GHQ-12 (Goldberg and Williams 1988) in its German version (Schmitz et al. 1999b; Goldberg and Williams 1988). The GHQ is a screening instrument for mental health problems and has been used in a number of WHO studies and in the primary care sector (Schmitz et al. 2001). The short GHQ-12 version consists of 12 questions. Each of the 12 items can be scored on a Likert scale from 0 (not at all) to 3 (much more than usual) points, resulting in a sum score ranging from 0 to 36, which according to Goldberg and Williams (1988) may serve as a global measure for mental health strain. Instead of using the Likert scale, the GHQ may be analysed in a dichotomic fashion (Goldberg and Williams 1988). In this case, each item receives a value of either 0 (in the case of 0 or 1 point in the Likert scale) or 1 (in the case of 2 or 3 points). According to this latter procedure, the test result may be expressed either as the mean of all 12 items resulting in a value between 0 and 1 or as a sum resulting in a value between 0 and 12. GHQ values vary between populations and countries (Goldberg et al. 1998). Using the dichotomic method and adding up the values, a cut-off equal or above four has been defined and applied in two European studies (British Heart Foundation 2006; Linden et al. 1996) and therefore seems to be applicable also to our sample. The reliability of the GHQ scale for our data is similar to that reported in other studies (Goldberg et al. 1997) with a Cronbach's α of 0.86.

Statistical methods

We performed descriptive statistics applying SPSS (13.0). In order to compare subgroups of our sample with respect to the time expenditures and the GHQ values we used univariate ANOVA in order to compare subgroups of our study. This made it possible to enter all group factors simultaneously and to calculate, additionally to significance of the group differences, the associated effect sizes. For the dichotomic variables such as the adverse events or the cut-off we used χ^2 tests. We did not analyse group differences of the GHQ dichotomic scale values, because these variables do not fulfill the qualifications for a t test and such an analysis,

however, would not have contributed to new information. Furthermore, we used χ^2 and student's t test for comparing our sample with samples of other studies. A P-value <0.05 was defined as significant. The effect size was calculated as η^2, i.e. the percentage of the variance in the sample explained by the respective independent variable (group factor). An $\eta^2 = 0.01$ was defined as a small, an $\eta^2 = 0.06$ as a medium, and an $\eta^2 = 0.14$ as a high effect (Cohen 1988).

Results

Workload and working conditions

We explored how many hours (60 min) teachers work per week (Table 1). First, there is the "teaching load" (*component A as indicated above*). Second, teachers spend time for preparing lessons, correcting class tests, participating in conferences, communicating with parents and pupils, and administrative duties. We called this "additional work" (*component B*). Third, there are "responsibilities" (*component C*) such as being school head or deputy school head, class teacher; there is pastoral care, equipment maintenance, other support services, presentation of department conferences, coordination of vocational training, support service of a subject, leadership of work groups, counselling service for student teachers, ordering of material, and so on. Fourth, time is spent on the "supervision of pupils" (*component D*). Fifth, if other teachers are absent, "additional teaching lessons" (*component E*) have to be done.

We restricted our calculations on how many hours per week teachers work, to the group of teachers with a 100% working load ($n = 332$, 35%; here teachers working >75 and <100% were not included). Since a period consists of 45 min, we converted the full-time teaching load into 21 h/week for Hauptschulen and 18.75 h/week for Gymnasien. Besides their teaching hour, full-time teachers indicated 20.2 h/week for *additional work* (*component B*) resulting in an average of 39.4 h/week for teachers in Hauptschulen and 41.2 h/week for teachers in Gymnasien for both components A and B. Teachers in Gymnasien indicated significantly more time for additional work than teachers in Hauptschulen ($P < 0.001$). An interesting finding was that part-time teachers (75% of the normal teaching load and less) did proportionally more *additional work*. *Additional work* load divided by the teaching load was 1.6-times (Hauptschulen) or 1.8-times (Gymnasien) higher for teachers doing part-time work compared to teachers doing full-time ($P < 0.001$). With respect to gender or age, *additional workload* beside teaching hours did not differ. As indicated above, we asked teachers about time spent on r*esponsibilities* (*component C*). Since teachers indicated amounts of time for this component up to 80 h/week, this question was obviously misunderstood by some of the teachers, such that they indicated certain time expenditures twice. After excluding unrealistic answers with sums >20 h (this applied for $n = 34$, 10% of the cases), an average of 9.4 additional weekly hours for component C remained for full-time teachers. Neither gender nor age nor school type had an effect in this respect. For *supervision of pupils during breaks, etc.* (*component D*), teachers occupied 36.5 min/week on average. Teachers in Gymnasien do significantly less supervision with 31.7 min/week compared to teachers in Hauptschulen with an average duration of 40.0 min/week ($P = 0.032$). Asked for the average of *additional teaching lessons per week* (*component E*), teachers indicated 1.2 extra hours of teaching per week. Gender, age, or school type did not make a difference. The effect sizes of the afore-mentioned differences with respect to these time expenditures, although significant, ranged between $\eta^2 = 0.017$ and $\eta^2 = 0.050$, defined as small effects. Only the differences in time spent with participating in conferences if related to school types had a medium effect size of $\eta^2 = 0.075$. In conclusion, our main finding was: if the five components were added, full-time teachers work 51.2 h (of 60 min) a week in secondary modern schools and 51.5 h in grammar schools.

The occupational burden of teachers is not only expressed by working hours. Teachers were asked for negative experiences with pupils (verbal insults, threat of violence, deliberate damage to personal property, and violence) and with parents (complaints, accusations, verbal insults, and violence) within the last 12 months (Table 2). Experiences of verbal insults by pupils were indicated by 42.6% of the whole teacher sample, deliberate damage to their personal property by 6.8%, threat of violence by 4.4%, and 1.4% of the teachers were personally affected by violence. Gender had no significant effect in this respect. Compared to Gymnasien, the 12 months prevalence in Hauptschulen was significantly higher with respect to verbal insults, deliberate damage to personal property, threat of violence ($P < 0.001$ each), and violence ($P = 0.031$). Violence occurs most often ($P = 0.002$) to teachers in the age group of 35–44. Full-time teachers indicated significant more verbal insults ($P = 0.017$) and threat of violence ($P = 0.013$) than part time teachers. With respect to the relationship between teachers and parents, the 12-months' prevalence of complaints was 43.1% and that of accusations 21.1%. The prevalence of verbal

Table 1 Means (M) and standard deviations (SD) of data concerning working conditions and working hours

	Whole sample $N = 331$ M(SD)	Gender			Age					School type		
		Male $N = 194$ M(SD)	Female $N = 136$ M(SD)	Anova P	<35 $N = 27$ M(SD)	35–44 $N = 43$ M(SD)	45–54 $N = 105$ M(SD)	≥55 $N = 153$ M(SD)	Anova P	Gymnasium $N = 144$ M(SD)	Hauptschule $N = 187$ M(SD)	Anova P
Additional weekly working load (h/week) beside lessons												
Total	20.2(8.89)	20.1(9.31)	20.0(8.18)	0.138	20.3(8.28)	18.5(7.88)	19.0(7.66)	19.5(8.99)	0.761	22.4(9.51)	18.4(7.99)	**<0.001**
Preparing and postproc. lessons	10.5(5.45)	10.7(5.63)	10.2(5.00)	0.753	12.8(5.75)	11.0(5.37)	10.8(5.38)	10.6(5.86)	0.707	11.8(5.82)	9.5(4.93)	**<0.001**
Correcting class tests	3.8(3.16)	3.7(2.93)	3.8(3.47)	0.090	2.91(1.94)	3.11(2.67)	3.46(2.63)	4.00(3.31)	**0.019**	4.5(4.23)	3.2(1.79)	**<0.001**
Communicating with parents/pupils	1.5(1.73)	1.4(1.69)	1.7(1.78)	0.199	1.29(1.06)	1.17(1.26)	1.36(1.35)	1.38(1.60)	0.774	1.4(1.45)	1.7(1.79)	0.239
Administrative duties	1.2(2.69)	1.2(3.22)	1.1(1.69)	0.777	0.99(0.91)	1.10(0.84)	0.92(1.31)	0.93(2.59)	0.726	1.5(3.47)	1.0(1.85)	0.113
Participating in conferences	1.1(0.77)	1.1(0.66)	1.2(0.89)	0.553	1.0(0.73)	0.99(0.57)	1.10(0.84)	1.14(0.71)	0.946	0.9(0.60)	1.3(0.83)	**<0.001**
Work in projects	0.8(0.88)	0.7(0.76)	1.0(0.99)	**0.002**	0.7(0.79)	0.62(0.69)	0.72(0.77)	0.72(1.00)	0.482	0.7(0.78)	0.8(0.94)	0.288
Other activities	1.2(3.93)	1.4(4.55)	1.0(2.83)	0.913	0.59(1.19)	0.79(2.68)	0.67(1.98)	0.73(2.62)	0.698	1.6(5.08)	0.9(2.71)	0.498
Further work (hours per week)												
Responsibilities	9.4(10.7)	9.3(10.1)	9.5(11.7)	0.759	4.67(4.88)	5.74(6.84)	8.13(9.67)	7.62(9.88)	0.144	8.7(10.8)	9.9(107)	0.230
Supervision of pupils (min/week)	36.5(25.9)	34.6(23.5)	39.3(29.1)	0.410	31.1(19.8)	30.1(18.6)	35.0(40.2)	37.0(26.0)	0.143	31.7(22.0)	40.0(28.0)	**0.032**
Additional teaching lessons	1.2(1.0)	1.2(0.97)	1.2(1.03)	0.903	1.06(0.92)	0.91(0.86)	1.05(1.12)	0.99(0.94)	0.852	1.1(1.08)	1.2(0.92)	0.432

Included were only the 100% working teachers ($N = 331$), thus no calculations for group differences referring to "working load" were conducted. The P-value indicates the significance for a difference between the subgroups calculated by univariate ANOVA

Table 2 Numbers (*n*) and percentage of the valid values (%) of negative experiences with pupils and their parents are given

	Whole sample	Gender			Age						School type			Working load		
	N = 949 *n*(%)	Male *N* = 339 *n*(%)	Female *N* = 602 *n*(%)	χ^2 *P*	<35 *N* = 107 *n*(%)	35–44 *N* = 189 *n*(%)	45–54 *N* = 288 *n*(%)	≥55 *N* = 352 *n*(%)	χ^2 *P*		Gymnasium *N* = 426 *n*(%)	Hauptschule *N* = 435 *n*(%)	χ^2 *P*	Full time *N* = 622 *n*(%)	Part time *N* = 327 *n*(%)	χ^2 *P*
Negative experiences with pupils																
Verbal insults	404(42.6)	150(44.2)	251(41.7)	0.447	52(48.6)	91(48.2)	118(41.0)	137(39.0)	0.107		126(29.6)	278(53.2)	**<0.001**	282(45.3)	122(37.3)	**0.017**
Threat of violence	42(4.4)	17(5.0)	25(4.2)	0.539	6(5.6)	6(3.2)	18(6.3)	11(3.1)	0.192		4(0.9)	38(7.3)	**<0.001**	35(5.6)	7(2.1)	**0.013**
Deliberate damage	65(6.8)	24(7.1)	41(6.8)	0.876	7(6.5)	19(10.1)	23(8.0)	16(4.6)	0.093		11(2.6)	54(10.3)	**<0.001**	41(6.6)	24(7.3)	0.665
Violence[a]	13(1.4)	3(0.9)	10(1.7)	0.327	2(1.9)	8(4.2)	1(0.3)	2(0.6)	0.002		2(0.5)	11(2.1)	**0.031**	9(1.4)	4(1.2)	0.778
Negative experiences with parents of pupils																
Complaints	409(43.1)	157(46.3)	248(41.2)	0.128	53(49.5)	90(47.6)	126(43.8)	133(37.9)	0.063		185(43.4)	224(42.8)	0.853	289(46.5)	120(36.7)	**0.004**
Accusations	200(21.1)	76(22.4)	122(20.3)	0.437	24(22.4)	39(20.6)	62(21.5)	70(19.9)	0.936		73(17.1)	127(23.7)	**0.007**	149(24.0)	51(15.6)	**0.003**
Verbal insults	45(4.7)	14(4.1)	31(5.1)	0.482	4(3.7)	9(4.8)	15(5.2)	17(4.8)	0.946		16(3.8)	29(5.5)	0.197	34(5.5)	11(3.4)	0.148
Violence[a]	4(0.4)	2(0.6)	2(0.3)	0.560	0	2(1.1)	0	2(0.6)	0.305		1(0.2)	3(0.6)	0.423	2(0.3)	2(0.6)	0.512

The *P*-value indicates the significance for a difference between the subgroups calculated by a χ^2-test

[a] Calculation for group effects with an exact fisher test, due to the small class sizes

insults was 4.7%, and 0.4% experienced violence. If school types were compared, the 12-months' prevalence of accusations by parents in Hauptschulen was significantly higher ($P = 0.007$). Compared to part-time teachers the full-time teachers had a significantly higher 12-months' prevalence of complaints ($P = 0.004$) and accusations ($P = 0.003$) by parents.

General health questionnaire (GHQ-12)

Based on the sum of the Likert-scale points (ranging from 0 to 36), our sample displayed a mean value of 12.25 points (SD = 5.08). Variables such as gender, age, and full-time versus part-time duty did not make a difference. Only for school types, there were small but significant differences with higher values in Hauptschulen ($P = 0.037$ in the Likert scale with an effect size of $\eta^2 = 0.005$, i.e. less than small). Based on the dichotomic evaluation of the GHQ according to Goldberg, our sample displayed a mean score of 0.211 (SD = 0.246) equivalent to a sum score of 2.53 (SD = 2.96) (Goldberg and Williams 1988; Goldberg et al. 1998). We found 29.8% of all teachers to be equal or above the cut-off of four indicating significant strain with respect to mental health (Table 3).

Discussion

We analysed occupational burden and mental health parameters of 949 teachers working in either grammar schools (Gymnasien) or secondary modern schools (Hauptschulen) in three districts in southwestern Germany. We found that, based on what teachers indicated, full-time teachers work more than 51 h/week. Furthermore, teachers are confronted with a considerable number of negative, threatening experiences with both pupils and their parents. A third finding was that nearly 30% of the teacher sample showed a significant mental health strain indicated by a GHQ value equal or beyond the cut-off of four.

In this study we contacted all ($N = 1{,}114$) Gymnasium and all Hauptschule ($N = 1{,}370$) teachers of three school districts in southern Germany. Since only 38.2% ($N = 949$) of the teachers returned the questionnaires, our sample can hardly be regarded as representative. However, based on experiences from other studies with teachers, a return rate of nearly 40% is anything else but bad. Although the responders, being our sample did not differ from the whole group of all contacted teachers with respect to age and gender, a bias cannot be excluded. According to Körner (2003) and Schmid (2003), teachers who do not return questionnaires,

Table 3 Means (M) and standard deviations (SD) of the scores for the GHQ-12

	Whole sample $N = 949$ M(SD)	Gender			Age					School type			Working load		
		Male $N = 339$ M(SD)	Female $N = 602$ M(SD)	Anova P	<35 $N = 107$ M(SD)	35–44 $N = 189$ M(SD)	45–54 $N = 288$ M(SD)	≥55 $N = 352$ M(SD)	Anova P	Gymnasium $N = 426$ M(SD)	Hauptschule $N = 523$ M(SD)	Anova P	Full time $N = 622$ M(SD)	Part time $N = 327$ M(SD)	Anova P
∑ Likert scale	12.25(5.08)	12.33(5.07)	12.20(5.10)	0.265	11.9(5.66)	12.2(5.24)	12.6(5.00)	12.2(4.93)	0.494	11.88(5.16)	12.56(5.01)	**0.037**	12.26(4.94)	12.25(5.34)	0.665
Mean dichotomic scale	0.21(0.25)	0.22(0.25)	0.21(0.24)		0.22(0.24)	0.21(0.24)	0.22(0.24)	0.20(0.25)		0.19(0.24)	0.22(0.25)		0.21(0.24)	0.21(0.25)	
∑ dichotomic scale	2.53(2.96)	2.61(3.01)	2.48(2.93)		2.67(2.30)	2.51(2.91)	2.61(2.88)	2.43(3.04)		2.33(2.91)	2.69(2.99)		2.55(2.93)	2.50(3.02)	
Cut-off		n(%)	n(%)	χ^2	n(%)	n(%)	n(%)	n(%)	χ^2	n(%)	n(%)	χ^2	n(%)	n(%)	χ^2
∑ dichot. scale ≥4	273(29.8)	104(31.5)	168(28.8)	0.392	32(30.5)	54(29.5)	84(30.2)	100(29.3)	0.993	111(27.0)	162(32.1)	0.091	178(29.8)	95(29.9)	0.985

In the lower part, numbers (n) and percentages of the valid values (%) of the teachers above the declared cut-offs in the GHQ scores are indicated. The P-value indicates the significance for a difference between the subgroups calculated by univariate ANOVA or by Chi²-test

compared to the rest, represent a more heavily burdened fraction. If this should actually apply, our data, especially those of the GHQ, would underestimate the professional strain of teachers.

An important aspect of teachers' health is reflected by the time teachers spend with professional tasks, which we expressed as a sum of five different components. Remarkably, additional work (Component B) that has to be done besides teaching lessons (Component A) is proportionately 1.6 (Hauptschulen) and 1.8 times (Gymnasien) higher for teachers working 50% compared to those working 100%. Teachers in Hauptschulen spent significantly more time than their colleagues in Gymnasien on the supervision of pupils (Component D). Adding the five components we end up with a weekly working load of 51.5 h in Gymnasien and 51.2 h in Hauptschulen, valid for teachers with a 100% working load. Beside this quantitatively high workload, a remarkable proportion of teachers reported both verbal insults by pupils and complaints or accusations by parents during the last year. Furthermore, a considerable number of teachers reported the experience of vandalism, threat of or committed violence by pupils in the last 12 months. Also parents turned out to be a yielding source of adverse events. Teachers of Hauptschulen reported significantly more negative experiences with pupils and more accusations and complaints by parents. Thus, there is no reason to assume that teachers have a kind of comfortable job. Instead, being a teacher rather appears to be hard work.

Both, a high working load and a remarkable degree of threatening events in the context of their professional work may well elevate the risk of health problems. In order to detect the respective effects, we applied the general health questionnaire (GHQ). The GHQ is a valid and reliable screening instrument for mental health problems (Goldberg and Williams 1988; Baumeister et al. 2004; Goldberg et al. 1997; Heun et al. 1998; Schmitz et al. 1999a; Schmitz et al. 2001). Prosser found a GHQ-12 mean value of 11.8 (SD 5.0, $n = 121$) when investigating the staff of a psychiatric hospital (Prosser et al. 1996), which is not significantly different from our findings. Thus, working in schools appears to have a comparable impact on health as working in a psychiatric hospital. When the GHQ data were analysed by generating the average of the dichotomic scale values, our sample showed a lower mean value than German primary health care patients ($n = 4{,}841$) in a WHO study (0.211 vs. 0.258, $P < 0.001$). However, given the fact that our sample included "healthy" persons and the WHO study dealt with patients, these latter data are hardly comparable. We

found 29.8% of teachers (31.5% for male and 28.8% for female teachers) scoring above the cut-off of four, which appears to be a quite high-rate of mental health problems in a working population. For comparison, a British study with a large, representative general population sample ($n = 13.814$) found a rate of only 11% for men and 15% for women above this cut-off (British Heart Foundation 2006). Mental health problems indicated by our teachers differ significantly from the British sample ($P < 0.001$ for males and $P = 0.018$ for females).

In conclusion we found that, at least in our sample, teachers have a high working load and deal with a remarkable extent of adverse events caused by pupils and/or parents. This appears to contribute to the mental health strain that is reflected by our findings with the GHQ. Considerable efforts have been made to define consequences that have to been drawn in order to protect and improve teachers' health (e.g. the "Landauer Empfehlungen" containing recommendations by a German group of experts) (Heyse 2004). Similar proposals have been made by Friedman (1999). With respect to our data, we think that, at least in Germany, teachers' health cannot improve without addressing the situation of children. Increasing rates of aggressive events, including several death cases caused by violence exerted by pupils, during the past years reflects a deteriorating mental health situation of children. Recent studies found high rates of psychosomatic and psychiatric disorders in German pupils (Schmidt-Lachenmann 2000; Ziegert et al. 2002). Improving the situation of children is a long-term goal that requires changes in attitudes not only by parents but also by our societies. In order to do something that may be effective in a short-term perspective, we offered to teachers Balint-like supervision groups. Our intention is to improve the ability of teachers to develop positive relationships both with pupils and their parents, and to improve the solidarity between teachers, which probably is the most important component of teachers' social support in the school. To what extent such interventions may be of help, is subject to an ongoing evaluation. In any case our data confirm a statement made by Philip Bigler when he was honoured in 1998 as "teacher of the year" by the former US president Bill Clinton: "To be a teacher is forever to be an optimist."

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