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Family Friendliness at German Higher Education Institutions: About the Effectiveness of Strategies and Measures for the Reconciliation of Science and Care

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Often academic personnel at German higher education institutions succeed only with difficulty to create compatibility of their work and family tasks for children or needy relatives. In fact the usual case is to delay family foundation which corresponds with high rates of childlessness. In Germany 74 per cent of female and 71 per cent of male academic staff (non-professors) are childless. Professors have children more often than academic staff. But it is noticeable that female professors (62%) are twice as often childless than male professors (34%) (Bundesministerium für Bildung und Forschung (BMBF) 2010; Metz-Göckel, Heusgen, Schürmann, Selent (in press)). On the other hand 70 per cent of academic personnel would like to have a child (Lind, Samjeske 2009). Moreover after the PhD-phase women’s presence at higher education institutions decreases step by step (Gemeinsame Wissenschaftskonferenz (GWK) 2013).

The diverse reasons for these phenomena were studied in past research projects. Explanations for childlessness (in case of a wish for a child) are minor planning security, little financial security and lack of occupational establishment (Lind; Samjeske 2009): Latest data clarifies that about 90 per cent of academic personnel have temporary and short-termed contracts, about 43 per cent are employed through project-funding. Especially women often work part-time or have temporary contracts (Konsortium Bundesbericht Wissenschaftlicher Nachwuchs 2013; Gemeinsame Wissenschaftskonferenz (GWK) 2013; Jongmanns 2011). In general becoming a professor will ensure non-temporary contracts. But the path of getting one of the rare jobs as a professor is long-termed and requests dissertation as well as a second book (“habilitation”). As a result academic careers can be described as highly competitive and pressured (Metz-Göckel, Möller, Auferkorte-Michaelis 2009). Besides working and employment conditions academic culture is also of interest. It is often denoted as all-consuming and as a (male) way of life (ibid.; Krais, Beaufays 2005; Krais 2008; Beaufays 2013). In this understanding higher education institutions are labeled as greedy institutions (Coser 1974), where everybody has to be always available and free of daily tasks and family work. Academic personnel who still became parents complain about the fact that qualification and family foundation occur at the same time and clash. Besides they complain about the lack of sufficient childcare arrangements (Lind 2012). Once more for women the reconciliation of work and care is difficult due to the persistence of semi-traditional role-models (Allmendinger, Haarbrücker, Fleigner 2013; Rusconi 2013; Schiebinger, Gilmartin 2010).
Therefore the challenge balancing an academic career and founding a family as well as fulfilling family-related obligations is a highly controversial topic in German science policy debates and within higher education institutions. Politics gave diverse recommendations and guidelines for improving the reconciliation of science and family (e.g. Hochschulrektorenkonferenz (HRK) 2003; Wissenschaftsrat 2012; Hochschulrektorenkonferenz (HRK) 2012; Wissenschaftsrat 2013; Gemeinsame Wissenschaftskonferenz (GWK) 2012). In particular the recommendations were aimed at rising women’s presence in academia. Moreover politics and higher education institutions are establishing numerous individual measures, research projects and audits to deal with the diverse barriers of founding a family and the problems of finding a work-life balance.

There is, however, only little systematic knowledge on the impact of these measures (see Bundesministerium für Bildung und Forschung (BMBF) 2013). What are effective strategies and measures for greater family friendliness in German higher education institutions? This question was at the core of the project “Effektiv! - For Greater Family Friendliness in German Higher Education Institutions” (www.familienfreundliche-hochschule.org, see Kunadt, Schelling, Brodesser, Samjeske 2014) which was being conducted from March 2011 to June 2014 by the Centre of Excellence Women and Science (CEWS) and funded by the German Federal Ministry of Education and Research (BMBF). The project was based on three pillars: 1) research, 2) knowledge transfer and 3) dissemination (see figure 1).

![Effektiv!](image)

**Figure 1: Project design**

One objective of the project was to analyse the impact of existing initiatives at German universities or universities of applied sciences to gain new insights. A systematic review of relevant studies with emphasis on the German higher education sector was carried out. Moreover several quantitative and qualitative empirical surveys were conducted at four German higher education institutions: On the one hand online-interviews with academic personnel focussed on the perception and impacts of family friendly measures on the individual level. On the other hand, group discussions were conducted on the institutional level to discover how higher education leadership, decisions makers and practitioners deal with family friendliness and which impacts or consequences they report.

In this paper I would like to present selected survey results regarding the impacts of existing family friendly measures aiming at reconciliation of science and family from the perspective of the academic personnel (individual level).
SAMPLE AND OPERATIONALIZATION

In autumn of the year 2012 we conducted an online survey and interviewed the academic personnel of four higher education institutions (three universities and one university of applied sciences), which are all very involved in the topic of family friendliness. We aimed at comprehensive surveys.

<table>
<thead>
<tr>
<th>Academic Personnel</th>
<th>N=14,203</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sample Size</td>
<td>n=1,642, 12% (completed interviews)</td>
</tr>
<tr>
<td>Sex</td>
<td>male: 53%; female: 47%</td>
</tr>
<tr>
<td>Age</td>
<td>Ø 35</td>
</tr>
<tr>
<td>Position</td>
<td>Scientific staff: 86%; professors: 12%</td>
</tr>
<tr>
<td>Current qualification phase</td>
<td>PhD: 60%; Habilitation: 8%</td>
</tr>
<tr>
<td>Temporary contracts</td>
<td>79%</td>
</tr>
<tr>
<td>Relationship</td>
<td>86%</td>
</tr>
<tr>
<td>Parenthood</td>
<td>49%</td>
</tr>
<tr>
<td>Care (e.g. care for elderly family members)</td>
<td>2% primarily responsible, 3% involved</td>
</tr>
</tbody>
</table>

Table 1: Sample size of the online survey (academic personnel)

The sample size over all four institutions is 1,642. The response rate of completed interviews is 12 per cent. The response rate is probably larger because of address-duplications in the mailing lists which we could not resolve (N=14,203). A slight larger number of male academics responded than females because of the high percentage of males at one very big technical university (RWTH Aachen) in our sample (see table 1). Compared to the population size of all four institutions women are overrepresented in our sample. We presume a correlation to the survey’s topic. Basically all analyses were done gender specifically.

The average age of our respondents is 35 years. Moreover academic personnel with children are around 8 years older compared to those without (39 vs. 31 years). 86 per cent belong to the academic staff (non-professors) and 12 per cent are professors (male and female). This corresponds to 79 per cent having temporary contracts which nowadays is the usual case at German universities while not (yet) having a professorship (e.g. Konsortium Bundesbericht Wissenschaftlicher Nachwuchs 2013). The percentage of respondents of the academic staff (non-professors) at the university of applied sciences is less high (54%) and they do mostly have unlimited contracts (79%). In addition 60 per cent of our respondents are doing their PhD and 8 per cent are working on their second book (“habilitation”).

86 per cent of our respondents live in a relationship, thereof 80 per cent live together permanently in a common household. Nearly half of our sample is a parent (49%). In our sample 45 per cent of academic staff (male=47%, female=43%) and 81 per cent of professors (male=84%, female=71%) have children. Compared to Germany-wide data gender
differences are slightly noticeable but all in all parents are significantly overrepresented in our sample. Again, we presume a correlation to the survey’s topic.

87 per cent of parents live together in the same household with a child under the age of 18. 45 per cent of those children are less than 3 years old. 21 per cent are three to seven years old. Five per cent of our sample report responsibility for care (for example for elderly family members). Two percent are primarily responsible; three per cent are involved in care for their relatives. In our sample the share of house- and care-work between men and women depicts semi-traditional role-models: in relationships with and without children female scientists take over more than half of all house-work duties (59% respectively 58%), men take over one third (32% respectively 37%). Nearly the same percentages are revealed concerning care for children (women: 56%, men: 32%).

For our study, we selected several measures which are listed in table 2. Our rule for selection was that a measure had to be available at least at three of the examined higher education institutions. We did so for to increase the number of valid cases for our analyses. Altogether we selected 15 different measures. They are sorted into five fields of action: 1) working and employment conditions, 2) infrastructure, 3) childcare, 4) information and advisory service and 5) support for carers.

<table>
<thead>
<tr>
<th>Working and employment conditions</th>
<th>Infrastructure</th>
<th>Childcare</th>
<th>Information and advisory service</th>
<th>Support for carers</th>
</tr>
</thead>
<tbody>
<tr>
<td>flexible working hours</td>
<td>childfriendly canteen (Meals for free, adapted furniture)</td>
<td>childcare arrangements (kindergarten, nursery)</td>
<td>advisory service</td>
<td>information and advisory service for carers of needy family members</td>
</tr>
<tr>
<td>reduced working hours: profs (e.g. part time)</td>
<td>family rooms (workplace and little playground for kids)</td>
<td>babysitter agency</td>
<td>communication hub (via internet, brochures, flyers, events)</td>
<td></td>
</tr>
<tr>
<td>reduced working hours: academic staff (e.g. part time)</td>
<td>feeding and changing rooms</td>
<td>flexible childcare (e.g. in case of emergency, events, short business trips)</td>
<td>workshops/coaching concerning the reconciliation of science and care</td>
<td></td>
</tr>
<tr>
<td>family friendly diary management</td>
<td>childcare during (school)holidays</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2: Observed measures

Flexible working hours and family friendly diary management are special offers insofar that they are not offered university-wide. Often they are common at the institutional level in several departments, but usually there are no university-wide regulations. In everyday life these measures are of great importance for a successful reconciliation of work and care.

The analyses of the unweighted data are based on descriptive statistics of frequencies and means as well as categorisations of open-asked questions.
RESULTS

In our questionnaire we asked about utilisation, publicity, demand and impacts of our selected family friendly measures. We also investigated reasons for their disuse.

The next figure (see figure 2) shows the utilisation of measures by academic personnel with children (n=80-568) and the publicity of the measures among the same group (n=391-795). You can see the rates of academic personnel with children (red coloured, in per cent), who use or did use these measures. In addition you see (coloured blue) the publicity of the same measures (in per cent). For this and following cases please note: reduced working hours profs: only professors were asked; specific information for carers: academic personnel with and without children was asked.

![Figure 2: Utilisation and publicity of family friendly measures (per cent)](image)

Most of all flexible working hours (62%) and the communication hub (47%) are used. One third uses the childfriendly canteen. Mostly the use of the measures is rather small. Flexible childcare (7%), workshops/coaching (7%), reducing working hours for professors (5%), babysitter agency (5%), family rooms (4%) and specific information for carers (2%) come in last. In addition a lot of measures are used more often by mothers than by fathers, especially reduced and flexible working hours as well as the communication hub.

In relation to the publicity the following can be said: 84 per cent of those who know about flexible working hours also use them. Concerning flexible childcare, there are only 17 per cent, who use the known measure. Altogether the majority of measures is known to less than half of all respondents with children. Only five measures are very well known: childcare arrangements, flexible working hours, communication hub, childfriendly canteen and family rooms. In average (5 to 10 percentage points), respondents with children know the measures better than the ones without children; and again, mothers report to know the measures more often than fathers do.

In a next step we asked for the demand of family friendly measures. Figure 3 (n=421-797) shows the current demand of academic personnel with children who would like to use the
observed measures. The respondent’s demand is not covered by a measure. This has diverse reasons:

1) respondents do not know the measures,

2) respondents know them but do not use them or

3) respondents use a measure but articulate they still have more demand.

![Figure 3: Demand of family friendly measures (per cent)](image)

Relatively high uncovered demand is expressed for family friendly working and employment conditions: family friendly diary management (46%), flexible working hours (40%), and reduced working hours for academic staff (19%). Next to that there is great demand for childcare: flexible childcare (25%), childcare arrangements (21%), babysitting agency (19%) and childcare during (school)holidays (16%). There is also some demand for infrastructure: family rooms (19%) and childfriendly canteen (17%). Usually (except communication hub: internet, brochures, flyers) the demand concerning information and advice is covered pretty well. Reduced working hours for professors and specific information for carers are rarely in demand.

Highest demand is expressed by the group of respondents, who already use certain measures: they would like to use the measures more frequently (variation of values: between 25% and 68%). The demand of academic personnel with children differs regarding gender: women articulate greater demand for measures. For example: among the measures which are already in use women have an increased demand on flexible childcare than fathers.

Next we asked for reasons of disuse. Respondents who stated they do not use a certain measure and, at the same time have demand on that measure got the possibility to tell us why they do not use the offer. Table 3 shows frequent comments.
Table 3: Reasons for disuse

For example reduced working hours are not very attractive, because in general, the workload will not be reduced at the same time. Concerning childcare arrangements respondents frequently report far too few places. In the field of infrastructure the family rooms are sometimes unknown.

We were also interested in investigating the positive effects of the observed family friendly measures and addressed our questions to the academic personnel with children who utilised the measures. Figure 4 displays the degree of impact of the used family friendly measures regarding the reconciliation of work and family. Shown are the percentages of respondents, who rated on a six-point scale (1 = did not benefit at all, 6 = totally benefited) that they benefited (= 5) or totally benefited (= 6) of that measure. For some measures data is not displayed in figure 4 because the number of valid cases was too small (babysitting agency: n=18, family rooms: n=9, childcare during (school)holidays: n=25, specific information for carers: n=10). Displayed are all answers with a minimum sample size of 30.
More than half of all respondents with children benefited of childcare arrangements (83%), reduced working hours for academic staff (80%) and flexible working hours (74%). Also, half reported of a positive impact of family friendly diary management (50%). All up, childcare arrangements and family friendly working conditions have the highest positive impact. Noticeable less often respondents mentioned that they benefited of advice/information and workshops/coaching offers. However, comparably high rates of use and high demand in foreseeable future indicate their importance.

Again the differentiated analyses of mothers versus fathers revealed hints for the persistence of semi-traditional role-models among the academic personnel: for about a third of the measures applies that female scientists indicate significantly more frequently than males they benefited of these measures. This especially applies to the offer of childcare arrangements, reduced working hours for academic staff as well as the information hub. Regarding the other measures there is no gender bias.

A next step of our investigation was the exploratory analysis of more detailed impacts. In addition to the overall impact we investigated which various positive effects occurred for the respondents individually. We distinguished between five dimensions (see table 4) which we operationalized by twelve items. For every used measure the respondents were asked to score the items on a six-point scale (1 = do not agree at all, 6 = totally agree).

<table>
<thead>
<tr>
<th></th>
<th>Private</th>
<th>Job-related</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Temporal</strong></td>
<td>I have more time for me and my family.</td>
<td>It is possible to work (again).</td>
</tr>
<tr>
<td></td>
<td>I have more time for everyday tasks.</td>
<td>I have more time for my work/qualification.</td>
</tr>
<tr>
<td></td>
<td>My everyday life is more predictable.</td>
<td></td>
</tr>
<tr>
<td><strong>Qualitative</strong></td>
<td>My everyday life is less stressful.</td>
<td>I feel bonded closer to my institution.</td>
</tr>
<tr>
<td></td>
<td>Overall, I am more satisfied.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>I am more confident about the future.</td>
<td>I can work more productively.</td>
</tr>
<tr>
<td></td>
<td>The relationship between me and my family is more intense.</td>
<td></td>
</tr>
<tr>
<td><strong>Financial</strong></td>
<td>Costs are reduced.</td>
<td></td>
</tr>
</tbody>
</table>

*Table 4: Dimensions and items for the analysis of detailed impacts*

Table 5 displays the measures with the strongest effects for each dimension. In case of a mean of at least four strong effects are presumed. Please pay attention to the fact that due to partly small valid case-numbers our results only display exploratory tendencies of effects.
Table 5: Detailed impacts of family friendly measures

The analysis revealed that especially measures in the fields of childcare and working conditions show strong effects on the requested items. Besides, some measures in the field of infrastructure (family rooms, childfriendly canteen) as well as specific information for carers of needy family members show effects on several dimensions respectively on several items. Moreover it can be stated that measures with a great impact (see previous figure 3) indicate effects on several dimensions at the same time. This is true especially for childcare, family rooms and family friendly working and employment conditions. Because of childcare arrangements and family rooms women mention more often than men that it is possible for them to work again (job-related temporal dimension). Next to positive effects for the academic personnel we could observe positive effects for the higher education institution (see job-related qualitative dimension), which are increased labour-productivity through family friendly working and employment conditions, childcare and family rooms. In addition family rooms make the respondents feel bonded closer to the higher education institution.

SUMMARY AND DISCUSSION

As one part of the project “Effektiv! – For Greater Family Friendliness in German Higher Education Institutions” we investigated existing family friendly measures at German higher education institutions regarding their publicity, utilisation, demand and impact. Online-surveys of the academic personnel of four institutions were conducted.

A large number of measures are known by less than 50 per cent of the respondents with children. Only five out of 15 observed measures are known to more than half of our respondents. This is reflected by comparably low rates of utilisation. Only flexible working hours are used by more than half of all of our respondents. Except the childfriendly canteen and the information hub the rate of utilisation is less than 30 per cent.
The demand confirms the great importance of most of the observed measures, above all flexibility (working hours and appointments) and childcare. The percentages of persons with uncovered demand indicate specific restrictions. Important obstructions for the utilisation of measures are state of being unknown, lack of an adequate quantity or low quality (inappropriate working hours for childcare arrangements or too long-term registration deadlines for flexible childcare) as well as the fact that specific measures are not available institution-wide. Another reason may be the unchanged workload while using reduced working hours.

Lots of measures have strong positive impact on the reconciliation of science and family; most prominent are family friendly working and employment conditions and childcare arrangements. In addition family friendly infrastructure is helpful. Flexible working-time conditions, childcare and family rooms show detailed effects on several dimensions. The academic personnel reported temporal improvements on the private and on the job-related level (e.g. more time for the family, the job and the qualification). Moreover they reported qualitative improvements on both levels (e.g. less stress, greater satisfaction, better productivity).

Our gender specific analyses indicate persistent semi-traditional role-models in academia because female scientists take over house- and care-work more often than those who are male. Moreover for women the publicity and the utilisation of the observed family friendly measures are greater than for men (e.g. flexible and reduced working hours, communication hub); and women articulate greater demand (e.g. for flexible childcare). For about a third of the measures applies that female scientists indicate significantly more frequently than males they benefited of these measures, especially to the offer of childcare arrangements, reduced working hours for academic staff as well as to the information hub. Longer-term gender specific impacts (e.g. less pension rights for women because of reduced working hours) are critical aspects but this has not been analysed in our project.

How to deal with these results? How to put them into a nutshell? Regarding the ratings of the overall family friendliness of their institutions only a quarter of our respondents evaluated the family friendly measures in a positive way. Thereby, mothers who use the measures more often rate the family friendliness a little bit better than fathers. This corresponds with the results of our analysis of previous studies (systematic review), which we also studied during the project Effektiv (Kunadt et al. 2014): altogether family friendliness was rated moderately satisfactory at best; we observed slightly negative tendency. This estimation concerns basic structural parameters as well as the family friendly atmosphere. However, the respondents of our online-survey evaluated the family friendly atmosphere in a positive way, but especially women remark there are better job-perspectives in academia without having children. In addition, it is important to state the relevance of longer-term job-perspectives for the family friendliness of higher education institutions which was already discovered by previous studies (Bundesministerium für Bildung und Forschung (BMBF) 2010) and what was confirmed by our data.
We could summarize that German higher education institutions still didn’t reach their goal of being family friendly (yet). Altogether our observed family friendly measures do show positive impacts on the reconciliation of work and care but further work is urgently needed (e.g. improvement of quantity and quality, PR-Work, university-wide expansion). Especially family friendly working and employment conditions as well as childcare arrangements should be improved. Also, family friendly measures should specifically address the male target group. Moreover current measures at German universities do not pay enough attention to longer-termed contracts and job-perspectives for academic staff. They are virtually non-existing. Possible are tenure track models or regulations of minimal contract durations for jobs in externally funded projects as well as regulations in case of maternity or parental leave.

In general so called “objective” measures as basic structural parameters (e.g. childcare) seem to be more easily revisable regarding their impacts than rather “subjective” measures (e.g. mentoring/coaching at the individual level) (Riegraf, Weber 2013): regarding gender equality measures the authors noted the combination of both (objective and subjective measures) promises to be the most powerful, because structures are adjusted as well as the individual is directly addressed. This should also be taken into account while improving higher education institutions family friendliness.

Finally the aim of true gender equality should be to change structures and academic culture in the way that women and men are able to take up family responsibilities equally. However, in daily life women take over a lot more of these responsibilities; this is also true for the academic personnel. Therefore women are much more in struggle regarding the reconciliation of work and care (Kortendiek, Hilgemann, Niegel, Hendrix 2013). Care must be taken to understand that gender equality in academia is not subsumed as a sub-theme of family friendliness. Instead, both areas should relate to each other in critical discussion. This discussion should accompany a change in academic work-life-culture.

At the end, it should be noted that our impact analyses were exploratory. Our results represent insightful highlights and should be analyzed and substantiated in depth in future studies.

REFERENCES


**BIOGRAPHY**

Dr. Susann Kunadt

Study of sociology at Bielefeld University, diploma in 2004, worked as research assistant in the panel study “Crime in the modern city” (CRIMOC) at Bielefeld University (2005-2010): dissertation about the social ecology of juvenile delinquency in the city of Duisburg, since 2010 research assistant at the Center of Excellence Women and Science CEWS (part of GESIS – Leibniz Institute for the Social Sciences, Cologne) with research focus on gender in academic careers, reconciliation of academic work and family, and evaluation studies. Head of the research project “Effektiv! – For Greater Family Friendliness in German Higher Education Institutions”.