

# THESIS

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**All gender issues?**  
**How women are affecting the veterinary profession in Germany -**  
*A review of the past 20 years*

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## **1 Introduction**

As an international phenomenon feminization of veterinary medicine is a current topic of scientific research and subject of discussion in veterinary related media. Statistics and research suggest, that this trend towards feminization will continue in future.

With women constituting approximately 63.28% of 43.461 educated veterinarians and 89.45% of the first-year students in Germany in winter 2020/2021 the veterinary profession at least in terms of numbers has experienced an impressive gender shift. Research from several scientific studies points to the fact that feminization is more than a shift in numbers and has internal and external impacts on the profession in structure and status, which can maintain patriarchal structures, power and gender equity at the cost of profession. Highlighting the complex inter-relationships between profession and gender, a paradoxical dimension can be suggested, in which the veterinary profession, numerically feminized, still remains an inherent masculine project. Women help to gender the profession as masculine by adopting male characterized values and practice. This suggests the assumption that veterinary profession can be called a trans-gendered profession numerically dominated by women, but currently gender-typed in an opposite way. In the context of the topic under discussion additionally the question must be pursued, whether and to which extent the changes in the veterinary profession are only caused by gender or also generational related.

The aim of the present study is to examine, in which regard and to which extent, feminization has changed the veterinary profession by evaluating the feminization of this profession in its complexity and the current status of what is actually occurring in the profession in order to open perspectives for a future development. It is examined, whether male and female veterinarians noticed changes in their profession due to feminization and whether these changes perceived by them coincide with the effects of the predominance of female veterinarians, which are discussed in the theme related literature as inadequate income, salary discrepancies between male and female veterinarians, a lack of career opportunities particularly for women, moreover a decreasing number of practice owners in favour of a growing number of employed veterinarians and a shortage of veterinarians in specific areas of veterinary profession in contrast to a surplus of those in other areas of veterinarian work. The current status of issues discussed as possible impacts of feminization are presented in the literature review. The participants' assessments concerning the impacts of the feminization on the veterinary profession, enquired by means of a questionnaire-based online survey evaluated by statistical methods, is of central importance for the present research question.

## **2 Review of Literature**

### **2.1 The gender issue in the veterinary profession**

#### **2.1.1 Definition and concept of gender**

In the EQUAL guide to Gender Mainstreaming of the European Commission (EU), the social gender (English: „gender“) in difference to the biological gender (English:“sex“) is defined as the social differences and roles assigned to women and men. These gender roles as well as gender identity are based on learned behavior in the course of the growth process. They vary depending on the ethnic origin, the cultural background, religion, education, social class and the geographical, economic and political environment and may change over time. The strategy, to integrate a gender equality perspective at all stages and levels of all policy fields and areas of action into the prevailing social process, so that women and men profit equally is called „gender mainstreaming“ (European Commission, 2006).

In summary, it can be stated, that „gender“ is a construct based on stereotypes, on the one hand the descriptive stereotypes, pointing out the way, a gender is perceived by society and on the other hand prescriptive stereotypes, which prescribe the societal expectations regarding gender. Prejudices must be distinguished from stereotypes. In contrast to stereotypes, which are not to be regarded as fundamentally false due to the fact that men and women possess different characteristics, prejudices can be characterized as an attitude of rejection toward a member of a group and is therefore supposed to have the same characteristic attributed to that group (Stahlberg et al. 2009). This process is called “doing gender”. Each individual as well as society as a whole participates in this process (West and Zimmerman, 1987).

With the aim of preventing and eliminating discrimination on the basis of gender and sexual identity, race, ethnicity, religion and ideology, disability and age, the „General Equal Treatment Act“(2006), a German federal law, colloquially referred to as ”Anti Discrimination Law” has been enacted (European Commission, 2006).

#### **2.1.2 Women in the veterinary profession: the historical background**

Considering the beginnings of veterinary profession in the 19th century, it should be noted, that at this time women were excluded from professional education on the basis of gender until in the Weimar Constitution (1919) equal rights for men and women were enshrined in law.

Substantial changes in female education, life goals and opportunities in the second half of the 20th century were of crucial importance for female career aspirations in the 21st century. A significant role in fighting for women`s equal access to universities and professional

occupations played the so-called „Women`s Movement“ with its organized political claims for women`s rights. In Germany the first “Women`s Educational Association” was founded in 1865, followed by the founding of the „General German Women`s Association“. The issues were diverse, but the focus was on the struggle for education and suffrage for women (Wolff, 2008). First changes in the gender composition of veterinary medicine took place in Germany during the Weimar Period (1918-1933). At a time, when women generally were considered unsuitable for studying and working in their profession, their aptitude for veterinary practice was called into question. The possibilities to work were restricted to a few professional branches (small animal practices, institutes etc.). Nevertheless, sporadically expressions of appreciation concerning women practicing veterinary profession have been shown in the literature. In any case, it remains to be noted, that at that time gender relations were not free of tensions and problems (Maurer, 1997).

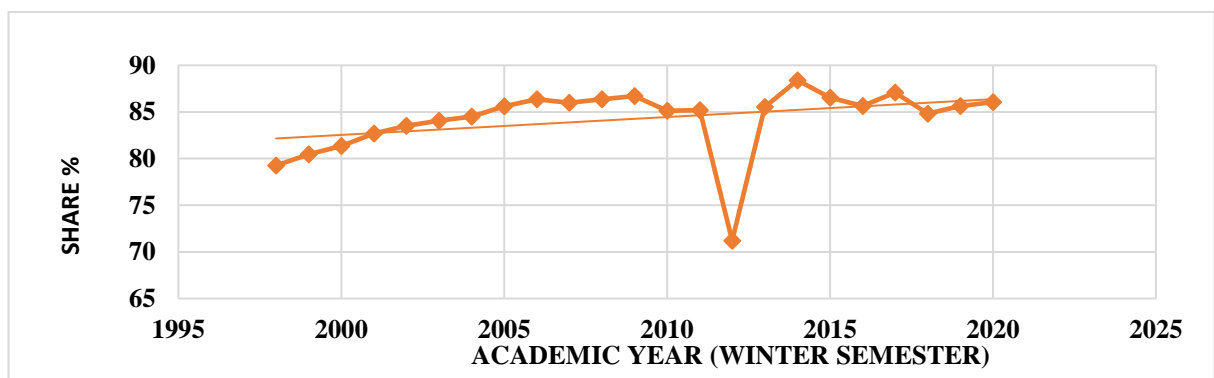
The absence of men caused by the second world war (1939-1945) opened new opportunities for women to work in their veterinary profession. Prejudices were eliminated more quickly as it would have been possible during peace time (Sackmann-Rink, 1985). After the second world war the number of female students and veterinarians increased noticeably from 14% in 1958/59 to 21.6% in 1968/69 to 39.6% in 1978/79 and then to 61.15% in winter 1988/89 (Maurer, 1997).

## 2.2 The quantitative development of women in veterinary medicine

### 2.2.1 Female Students of veterinary medicine in Germany 1998/1999 – 2020/2021

In the mid-eighties of the twentieth century the veterinary profession experienced a significant shift in gender distribution from male to female gender. Regarding the annually published statistics of the German Federal Chamber of Veterinarians (Bundestierärztekammer e.V., (BTK)) we can identify this shift in its course (**Figure 1**).

**Figure 1: Students of veterinary medicine in Germany: development of the female share**



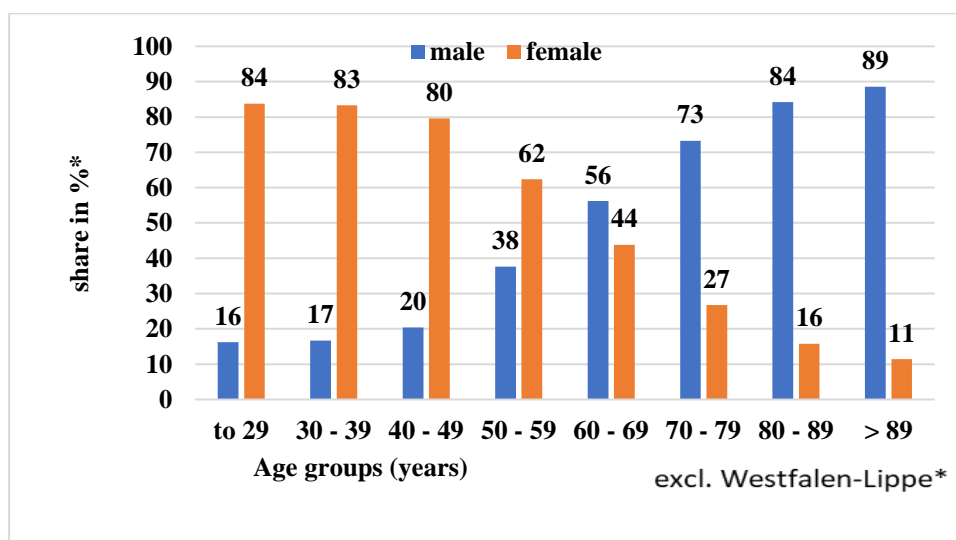
Source: Bundestierärztekammer, 2021

The female proportion adds up to 61.1% in the year 1988/89 and rises to 79.3 % in winter 1998/99. Then during the next ten years from 1998/99 to 2008/2009 the increase shows a slower course (86.35% in 2008/2009), a slight decline in winter 2012/13, before the number of female students stables off in 20017/18 with 87.1% and currently is plateauing in 20019/2020 with 85.3%. The percentage of female first-year students in 2020/2021 adds up to 89.45% (BTK, 2021).

### 2.2.2 Age Structure in the veterinary profession

As shown in **Figure 2**, the age structure of the veterinary profession also indicates the transition from a formerly male dominated to a currently female dominated one. Within the age groups the development shows a correlation between increasing age and increasing male share. The higher the class of age, the higher the male share or in turn, the lower the class of age, the more the percentage of female veterinarians increases. Comparing the gender distribution between several age classes, a dramatic decrease of the male proportion from 56.18% in the age group 60-69 years to 37.66% in the age group 50-59 years to 20.48% in the age group 40-49 years, can be noticed, before the curve stables off in the age group 30-39 years at a level of 16.71% respectively 16.21% in the age class of veterinarians being under 29 years old. In accordance with the minimization of the male share, the female proportion increases rapidly from 43.82 % in the oldest age group (60-69) to 62.34% (age group 50-59), then 79.56% (age group 40-49) to 83.29% (age group 30-39) and 83.79% in the youngest age class (BTK, 2021).

**Figure 2: Veterinarians: male and female share in % related to different age groups**



Source: Bundestierärztekammer, 2021



### **2.2.3 Practice form and employment**

In 2020 the female share of self-employed veterinarians adds up to 6.515 women (15%) from a total number of 43.461 veterinarians. Considering the form of practicing, it can be noted, that 54.29% of the registered 12.001 self-employed veterinarians working in a single (private) practice are female (45.71% male), whereas the female share of the total number of veterinarians working as employed veterinarians (9.732 persons) amounts to 82.53% (8.032 women), the male share is only 17.47%. Comparing the proportion of female veterinarians in a single praxis to the number of female employed veterinarians, their number significantly exceeds the number of those, who have chosen the status of self-employment (BTK, 2021).

The number of female veterinarians (3.188) working in the veterinary administration is significantly higher than the male share (1.416), likewise in veterinary educational institutions and universities (female 1.627, male 627) and in private business and industry (female 1134, male 579) (BTK, 2021).

### **2.2.4 Female share within the scopes of activities in the different age groups**

The trend towards feminization is also evidenced regarding the scopes of activities within the different age groups (**Figure 3**).

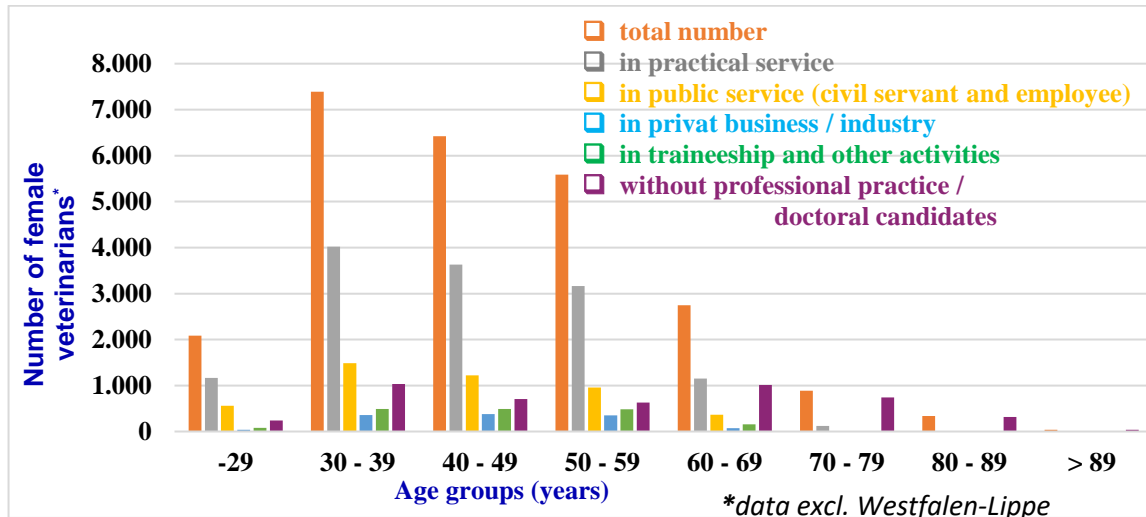
The female share in the various veterinary occupational fields, analyzed in terms of the different age groups, reveals, that the group of registered veterinarians not practicing the profession and doctorands/PhD candidates has a significantly higher number of women throughout all age groups: a female proportion of 9.76% of the total of 2.489 veterinarians in contrast to 1.41% men in the age group under 29 years, a percentage of 11.68 % women of the total of 8.851 veterinarians (0.63% men) in the age group 30-39 years, 8.75 % women (705 women of a total of 8.061 veterinarians, only 0.63% male) in the age group 40-49 years and 7.05% female veterinarians (1.62% men) in the age group of veterinarians 50-59 years old. The female proportion increases in younger age groups (under 29 years: 11.7%; 30-39 years: 9.8%) and then decreases with the increasing of age in the age group of women between 40 and 59 years old.

The lowest proportion of women can be found in the field of private business and industry, the age group of women under 29 years reveals a share of 1.65%, then increases to a percentage of approximately 4% in the age group 30-59 years old: 4.03 % in the group 30-39 years old, 4.7% in the group 40-49 years old and 3.92% in the group 50-59 years old.

The group of practitioners represents the largest share both in terms of male and female veterinarians throughout all age classes with the female proportion being higher: between 46.7% in the youngest group (under 29) and 45.4% in the group of 30 to 39 year olds. The percentage

decreases to 35.3% in the group of 50 to 59 year olds. Only in the group of 60 to 69 year olds the male percentage of practitioners is higher than that of women (18.5% female, 27.8% male) (BTK, 2021).

**Figure 3: Scopes of activity within different age groups of veterinarians in Germany 2020**



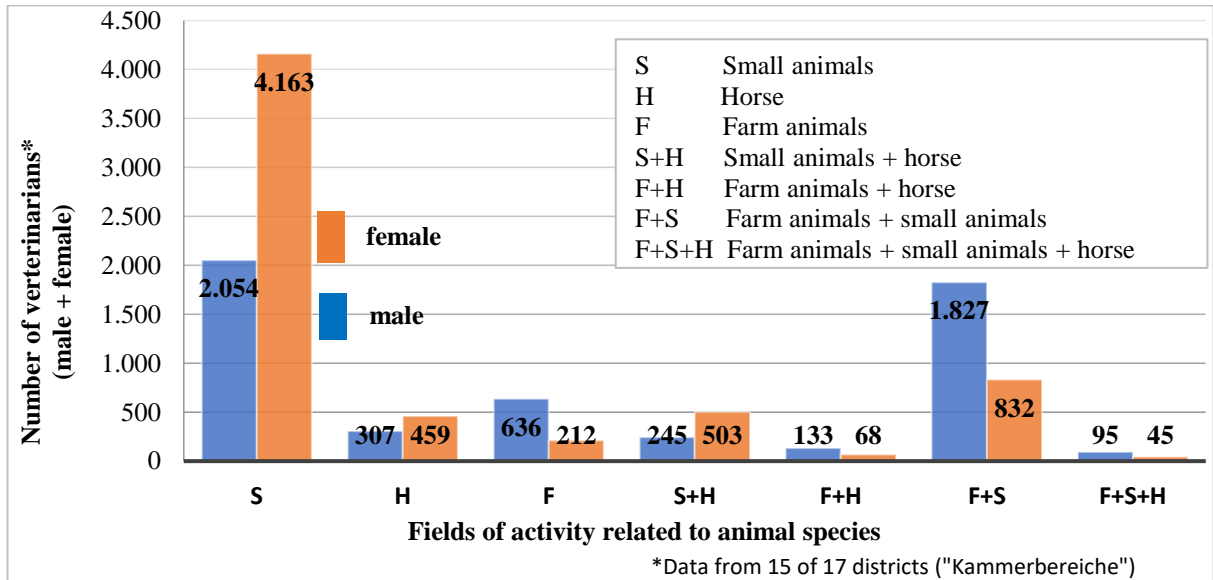
Source: Bundestierärztekammer, 2021

### 2.2.5 Female veterinarians in private practice

Comparing the number of veterinarians in the curative praxis, it gets evident (**Figures 4, 5**), that female veterinarians are overrepresented in small animal practice both as self-employed (4.163) and as employed veterinarians (1.253). The share of female practice owners exceeds the share of men by two times and within the employed veterinarians by almost seven times (1.253 female to 177 male). As practice owners, the number of women is far below the number of men in the field of farm animals (3 times more men: 636 male compared to 212 female), however, when it comes to employment of veterinarians, the female share predominates (60 women, 23 men). The same phenomenon can be seen, when comparing the gender distribution in the mixed practice for farm and small animals. The share of male practice owners is almost twice as high as that of females (1.827 men, 832 female). In contrast the male proportion of employed veterinarians is far below under that of their female colleagues (slightly more than three times as many women (302) as men (90)). The same applies to practices that treat farm animals and small animals (90 male, 302 female). Considering the gender ratio in the equine practice, the female share slightly outweighs that of men, but not to the same extent as observed in the field of the small animal medicine (459 female, 307 men as self-employed veterinarians), similarities in the share of employed veterinarians (119 female, 21 male). However, the number

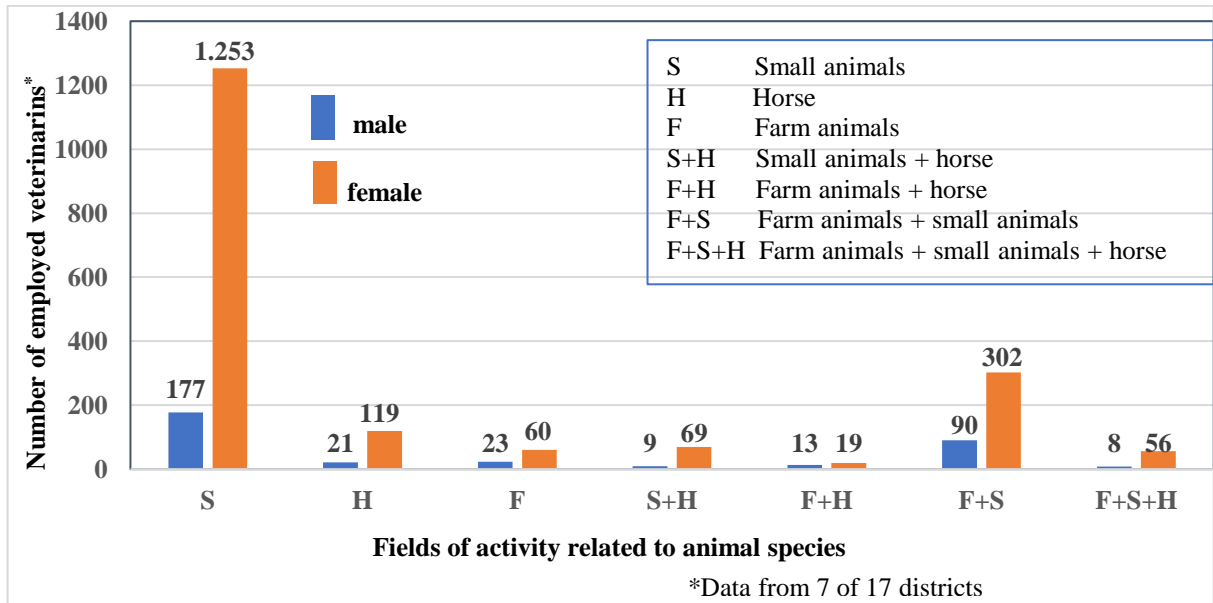
of self-employed veterinarians in the field of equine medicine is much lower in comparison to other occupational fields (459 female, 307 male) (BTK, 2021).

**Figure 4: Self-employed practitioners (male+female) by animal species in Germany**



Source: Bundestierärztekammer, 2021

**Figure 5: Employed practitioners (male+female) by animal species in Germany**



Source: Bundestierärztekammer, 2021

### **2.3 Causes of feminization of veterinary profession**

Men are not applying for admission to veterinary universities to the same extent as women. As a consequence women in veterinary practice are now a substantial proportion of veterinarian work force in Germany. The causes of this phenomenon are intensively discussed in the German and international subject-related literature. Several reasons have been taken into consideration to explain the high inflow of female applicants and a lack of interest in choosing this career path by men.

First it should be noted, that a discrimination at admission to university or any other education based on gender does not exist, women are allowed to study and work in all fields of science and in all professions. Moreover a wide range of female role models is another aspect, that can explain the observed gender shift in nearly all traditionally male dominated professions.

Additionally the image of a veterinarian as a caring person drawn by books and media may also contribute its share to the observed gender shift (Lofstedt, 2003).

A number of studies conducted in Australia, America and some European states prove that generally the factors motivating for studying veterinary medicine are the same for women and men, but both genders differently attach weight to the several factors (Lofstedt, 2003). The contact to animals and the influence of animals during their childhood is of crucial importance for both genders making their career choice. A German study reveals that a percentage of 92% considered themselves to have more „affinity for animals“ in comparison to others (Baumgärtel, 2016). This result coincides with older study results, which had already established that three quarters of all freshman students gave the motive „animal love“ as a justification of their study decision (Hesse, 2013). The proportion of those, who decided to study veterinary medicine because of „animal love“ (87.3%) and because of their experiences with their „own animals“ (89.1%) was quantified with almost 90% (Kostelnik, 2010).

But pondering the decision criteria in their entirety, some differences come to light: the „desire to help animals“ comes second within the female ranking of criteria. However men attach importance to factors concerning their future work place: aspects concerning the security of the profession, an adequate income and financial success (Allmendiger et al, 2003; Kostelnik, 2010), a good social status, the independence provided by the profession (Lofstedt, 2003) and career and promotion prospects (Lincoln, 2010). Men prefer broadly based opportunities to work and a challenging area of veterinary activity, whereas the motive „desire to help animals“ is ranked fourth (Kostelnik, 2010). In contrast to men, women give more weight to factors as „love of animals“, emphasizing the nurturing and caring side of veterinary profession (Irvine and Vermilya, 2010). The emotional factor „animal love“ makes the veterinary profession for a lot of women to their real „dream job“ (Baumgärtel, 2016).

Other decision criteria for choosing a veterinary career named by women are „interest in living creature“ and „medical interest“. On their list of decision criteria, financial aspects or social prospects are lower weighted in comparison to male decision factors (Baumgärtel, 2016).

## **2.4 Changes of veterinarian profession discussed in the context of feminization**

### **2.4.1 Stagnating wages and „gender pay gap“**

Under the aspect of feminization the subject-related literature considers several issues critically. One of the issues under discussion is the economic influence of feminization on the profession's business side. The problem of decreasing and stagnating wages has accompanied feminization not only in Germany and leads to the question, why and how the economic aspect is related to the predominance of women in veterinary profession. Another question is, to which extent this aspect contributes to the lack of interest of men to apply for a place at a veterinary university. Sociological studies point out paradoxical processes of feminization with significant impacts on important aspects of the profession (Bolton and Muzio, 2008; Kuhlmann and Bourgeault, 2008). Proved by sociological study, the preserving of the identity of a profession is an ongoing process, particularly in the case of internal and external changes, which a profession has experienced. As in other previously male dominated professions (teachers, pharmacy, human medicine etc.), external influences on veterinary profession are evident. In terms of the external impacts the phenomenon can be observed, that the more a profession is feminized, the greater is the loss of the social status respectively the profession's relevance in the eyes of society (Allen, 2016). The consequence of this is a drop in salaries – a paradoxical impact of feminization that in fact enhances gender injustice and gender inequality that is indicated by the „gender pay gap“ (Allen, 2016; Comba, 2020; Bolton and Muzio, 2008). This income gap is defined as the percentage difference between the average gross earnings of men and women. In Germany the salary of women was 18% lower than that of men (Statistisches Bundesamt, 2021).

According to data from a survey of the veterinary profession in Europe 2019, the average gender pay gap amounts to 12% in case of full-time working. In the future the majority of European veterinarians will be younger women, but they continue to be paid less than their male colleagues, although the gender pay gap is closing (Federation of Veterinarians in Europe (FVE), 2019).

There are various causes explaining this salary discrepancy between women and men. High gaps seem to be related to the high proportion of women working part time due to family

responsibilities therefore women more likely have career breaks in their career paths. In Germany a percentage of 77.8% of women worked in part-time in 2019 and almost every third executive was female (Statistisches Bundesamt, 2021).

Women more often work in employment or as associates in practices, led by male practitioners. Incomes earned as a self-employed veterinarian are generally higher than wages earned as a salaried practice assistant. Female veterinarians when owning a practice tend to set lower fees for veterinary services than male owners do (Irvine and Vermilya, 2010).

An American study showed, that the majority of graduates (men (86%, women 71%) would like to own a practice, but over time this interest decreases, especially among female veterinarians. Only 38% of them hold on the desire to own a practice in comparison to 61% of established male veterinarians (Lofstedt, 2003). A look at a study evaluating the private and professional situation of male and female employed veterinarians in Germany made evident that a high number of males (54.5%), when asked about a long-term employment, ruled out the possibility of remaining employed for the rest of their lives, in contrast only 33.1% of women responded in such way. Undoubtedly women show a greater willingness to accept an employee status provided that the working conditions are acceptable and satisfactory (Friedrich, 2007).

#### **2.4.2 The gender-leadership gap or opportunity gap discussed in the context of feminization**

The other phenomenon closely related to the income gap is the „gender-leadership gap“ (Kuhlmann et al., 2008) or “opportunity-gap” – the “vertical stratification” of the genders (Bolton and Muzio, 2008). Despite the numerical predominance of women, the leadership positions are mainly occupied by men. Women not only are less well presented in specialized working fields bringing higher earnings, they remain significantly under-represented among senior doctors, practice specialists, academic researchers and full professors. The term “glass ceiling” is a metaphor for this phenomenon, that qualified women hardly advance to top positions, but get stuck in their career. With each step on the scientific career ladder, the number of women decreases (“leaky pipeline”) (Veterinärmedizinische Universität Wien, 2015).

Underrepresentation of women in leading positions is known from other sciences, too. But in contrast to other sciences, the female share is significantly higher in veterinary medicine than e.g. in human medicine (Statistisches Bundesamt, 2020; Comba, 2020).

### **2.4.3 The aspect of work-life balance and the generational effect in the context of feminization**

Not only the gender issue, but also the generational aspect are challenges, we have to face regarding veterinary profession. The change of generations and accompanying changes in life concepts and life goals, ethical values and the value placed on profession peculiar to each generation, must also be included in the consideration of the topic under discussion.

There is no question that a change of values has taken place in our society. Both the importance of work and the demands placed on the working environment have changed. The concept „living to work“ internalized by the „babyboomer-generation“ (born between 1946 and 1964) has been replaced by the attitude of generation X (born between 1965 and 1980), that can be characterized as „working to live“. At present, the concept „living while working“, the concept of the work-force “generation Y” (1981-2000), is a societal reality with its effects not only on veterinary profession but also on other occupational fields of society (Kersebohm, 2018). As a consequence of this changed attitude towards work and the value placed on it in life, the aspect of work-life balance comes into focus. With regard to job satisfaction of practitioners in a profession, that beyond feminization is also confronted with a generational change and an associated change in attitude to life and work, it becomes evident, that issues discussed in context of feminization such as stagnating or lower wages, the gender pay and leadership gap, the imbalance of work and free-time for recreation, and the difficulty in reconciling family and career, lead to a significant decline of work-satisfaction (Kersebohm, 2018).

### **3 Material and method**

#### **3.1 The development and elaboration of the questionnaire**

After a first literature view, the main topics discussed in the context of feminization got evident. As a consequence it was possible to determine the thematic aspects of fundamental importance and to design a first draft of the questionnaire.

In the further course of studying the literature, this draft was revised several times with regard to its comprehensibility, its validity, the completeness of the topics and questions arising from the subject related literature and discussions, which must be covered. A pre-test on selected veterinary students was carried out. Working on the criticisms the final questionnaire was accomplished with a processing time of fifteen minutes. It was titled: “All gender issues? How women are affecting the veterinary profession in Germany“. The survey started on may 4. 2021 and ended on september 3. 2021. The online questionnaire consisting of 23 open and closed questions was created using the online survey provider “SurveyMonkey“. The questionnaire was preceded by a personal letter, which in addition to the request for participation in the survey also informed about the topic with its various aspects and the aim of the study. Brief information was provided about the addressed group, the duration of the processing time, the anonymity of the data collection and the evaluation of the results.

The survey was conducted anonymously, the case numbers assigned to the respondents were generated automatically using the IP address of the PC used to process the questionnaire.

#### **3.2 Target group and way of conducting the survey**

The target group of the present online survey were students of veterinary medicine of all study years and veterinarians independent of working in their profession or retired from service from several reasons. It was invited to participate in the survey in several ways: the German Veterinary Chamber (BTK) published the request for participation in the German Veterinary Journal (Deutsches Tierärzteblatt 05/2021). The Veterinary Chamber of Saxony-Anhalt, “vets-online“, as well as veterinary facebook groups also joined the call for participation. In addition, 85 veterinarians in curative praxis in Germany (districts: Nordrhein and Rheinland-Pfalz) were personally invited via email to participate in this study.



### **3.3 Analysis and processing of data**

Depending on the type of question at hand, different methods were used to analyze the data. Processing the data included the qualitative analysis of open questions and questions with the possibility for individual answers opened by means of free text-fields and following categorization in order to quantify the answers. “Open questions” were qualitatively analyzed with regard to the answers` content, categorized by means of key terms used in the responses (word clouds) and then assigned to the corresponding topics and interpreted. Numerous individual comments could be assigned to several topics. For this reason it was not possible to provide exact response figures. Nevertheless, the most frequently mentioned issues can be presented.

Non-answered questions were not included in the analysis. However, if the respondent answered to other questions, these questions were included in the scoring despite not answering previous questions.

All data were checked for plausibility. Excluded from evaluation were not plausible data being incomprehensible in their content and sense. As a consequence of these exclusions and partially response profiles, there are different numbers of cases.

For the statistical analysis, the statistical program provided by “SurveyMonkey” was used. Graphs and tables were created by using Microsoft Excel.

## **4 RESULTS**

### **4.1 Sociodemographic information**

#### **4.1.1 The target group**

266 questionnaires were available for evaluation due to the fact that all of them were completely filled in. The majority of the participants were veterinarians (95.49% of a total of 266 respondents), compared to a minority of students, most of whom were advanced students (fourth year: 38.46%; fifth year 30.77%). In total there were 41 respondents (15.41%) male and 224 respondents female (84.21%; diverse 0%, one person did not answer, 0.38%).

#### **4.1.2 Age groups of study participants and gender ratio**

Overall, the age of the respondents (n=265) covered a time span of 19-70+ years with more than half of all participants under forty years of age (55.10%).

Looking at the single age groups, the most represented group in terms of age was that of 31-40 year old respondents (34.34%) followed by the age group 51-60 year old (20.38%) and that of 24-30 year old respondents (18.87%). The age group of 41 to 50 year old veterinarians was slightly less represented in terms of numbers (17.36%). A percentage of 6.79% of the respondents were older than sixty years, one person over seventy years old.

The largest proportion of women was in the age group 19-40 years (60.09%), whereas the largest proportion of men was in the age categories of those over 50 years old (31.71% male to 18.39% female in the age group 51-60 years and 19.51% male to 4.48% female in the age group 61-70 years. Comparing the population of the study participants to the German veterinary profession, the gender ratio of questioned persons fit in coherently.

#### **4.1.3 Years of working in the veterinary profession**

The majority of participants (n=254) had many years of professional experience: 28.74% of the respondents looked back on 10-25 years of work experience and 20.87% of veterinarians to over 25 years of working in the veterinary profession. Only a small proportion of all participants worked in a field of activity outside unrelated to the profession (3.15%) or had left for reasons of age or illness (1.57% in total, female 1.40% to male 2.56%) or because of family obligations (1.40%), the latter group exclusively exposed of women.

Nearly the half (104) of all female participants (224 of n=254), asked about the number of years they had been working as veterinarians, were women, belonging to the three groups with the fewest years of work experience (1-2/ 3-5/ 5-10 years – a total of approximately 48.60% female

to only 23.07% of male respondents in these groups). In the group of participants with 10-25 years practicing as veterinarians, the proportion of women was still being higher (29.91%) than the male share with 20.051%, although the gap narrowed. Only in the group of those with over 25 years of professional experience, the numerical ratio changed fundamentally, when the male proportion (46.15%) significantly exceeded that of the women (16.36%).

## **4.2 Study and career choice**

### **4.2.1 Family background**

Approximately 36.84% of respondents (n=266, male 42, skipped 1; female 224) had a relative in their own family being veterinarian, physician or working in another medical profession, but the majority (63.16%) had not experienced a family relation to the profession. Almost all of the questioned persons grew up with animals, only a minority of 11.65% without animals. The female share growing up with animals was slightly higher than that of men (89.29% female; 85.37% male). Growing up with pets was mentioned most often (80.36% female; 70.73% male), followed by keeping horses (30.80% female; 29.27% male). The smallest share was represented by the group of those, who had grown up with farm animals (18.80%). More than twice as many men (34.15%) than women (16.07%) indicated having grown up with farm animals. Other animal species were named by 4.91% women and 12.20% of men.

### **4.2.2 Decisive motives for study and career choice**

Asked about the motives that were decisive for their choice of study and career, the respondents (n=266) rated the listed reasons on a Likert scale from “very important” to “in between” to “relatively important” and from “in between” to “not important” (**Figure 7**). For a simplified presentation the number of respective answers “very important”, “in between” and “relatively important” were added and presented as “positive” and those from “in between” to “not important” as “negative” (**Figure 6**).

When correlated by gender, the results showed the following (**Figure 6**): in contrast to men (41), women (224) gave the highest priority to the motive of wanting to help animals medically (94.60%, male 85.37%). In contrast to this, men named their interest in scientific study issues as the primary motive for their study and profession choice (92.96%), whereas women gave this motive only second place in their ranking (93.21% female). The aspect of having pleasure in dealing with animals and their owners, men ranked second (87.80%) and female weighted it equally with the desire to help animals medically (94.60%). In terms of the image of veterinary profession in society men and women considered it “relatively important” (male 76.92%,

female 72.76%), The variety of opportunities of work in different fields was rated significantly higher by male (70.73%) than by female (62.73%) respondents. In terms of “career opportunities” and “social status”, both genders agreed in that they attached only little importance to these motives, rating both the career opportunities (male 4.88%; female 4.98%) and the social status (male 2.44; female 4.07%) as “very important” (Figure 7). Only a minority of men (2.44%) and women (1.80%) rated financial aspects as “very important”.

**Figure 6: Decisive motives for study & career choice (male+female) (n = 266)**

n = 266 values in %	Important		Not important	
	male	female	male	female
desire to help animals medically	85.37	94.60	14.64	5.40
interest in study content	92.96	93.21	7.32	6.78
occupational image	76.92	72.76	23.08	28.24
variety of opportunities to work in different fields of veterinary medicine	70.73	62.73	29.26	37.27
income	60.98	34.69	39.02	65.32
status in society	56.10	41.62	43.90	58.37
pleasure in dealing with animals and owners	87.80	94.62	12.20	5.38
career & opportunities for advancement	51.23	42.53	48.78	57.46

**Figure 7: Decisive motives for study & career choice (male+female) (n = 266)**

n = 266 values in %	Important						Not important			
	very important		"in between"		relatively important		"in between"		not important	
	male	female	male	female	male	female	male	female	male	female
desire to help animals medically	29.27	59.46	34.15	16.22	21.95	18.92	4.88	3.60	9.76	1.80
interest in study content	56.10	47.96	24.39	20.36	12.20	24.89	4.88	2.26	2.44	4.52
occupational image	23.08	19.44	33.33	19.91	20.51	32.41	17.95	13.43	5.13	14.81
variety of opportunities to work in different fields of veterinary medicine	34.15	24.55	14.63	14.09	21.95	24.09	14.63	17.27	14.63	20.00
income	2.44	1.80	12.20	6.31	46.34	26.58	24.39	29.73	14.63	35.59
status in society	2.44	4.07	26.83	6.33	26.83	31.22	17.07	23.98	26.83	34.39
pleasure in dealing with animals and owners	43.90	49.33	26.83	21.97	17.07	23.32	9.76	3.59	2.44	1.79
career & opportunities for advancement	4.88	4.98	9.76	9.50	36.59	28.05	26.83	26.34	21.95	31.22

### **4.2.3 The possibility of gaining insight in veterinary profession**

The vast majority of respondents (75.94% of n=266) were able to gain an insight into the profession through an apprenticeship (9.02% or internship 66.92%), a minority of 22.18% had not gained any insight. A percentage of 7.14% answered individually (free text-field):

Eight persons gained insight due to the fact that they had veterinarians in their own family, four persons by doing an internship, five respondents by working on farms, animal parks or a practice and one participant by an apprenticeship. One respondent intentionally refrained from gaining insight in the veterinary profession.

### **4.2.4 Preferences regarding the occupational activity**

When asked about any preferences regarding their future occupation as a veterinarian, a clear majority of respondents (76.32% of n=266, male 42, female 224) indicated that they had already started their studies with a particular preference. A percentage of 23.68% had started their studies without a specific idea of what field of veterinary practice and form of employment, they wanted to work in after graduation. A clear majority of 40.98% was already decided to work with a specific animal species before the start of studies. A look at the gender distribution revealed that in this aspect the proportion of women (42.41%) clearly outweighed that of male respondents (34.15%). A percentage of 28.95% (male 34.15%; female 28.13%) had a clearly defined idea of their future area of work.

A **change in preference** was made for a variety of reasons.

A look at the results (**Figure 8**) made clear that both male and female veterinarians (n=194, male 27, female 166) gave three main reasons for changing their preferences. The compatibility of career and family or private life was named as the main reason by the male respondents (59.26%) and marginally lower weighted at 56.63% together with the aspect of working hours (56.63%) by the female respondents. The factor of working hours was named in second place by men (40.74%). With regard to the evaluation of the aspect of income, men and women differed significantly (female 42.77%, male 29.63%). Job security was ranked fourth by men (22.22%) and was weighted equally with the aspect of opportunities for vocational training and career (22.22%). In contrast to men, women were less likely to name job security (13.86%) and career opportunities (15.66%). More as twice as many female than male participants stated that experience and the realization that they were not suitable for the once preferred area of work had been the reason for their change of preference (female 24.70%; male 11.11%).

Of the total of 194 respondents, 49 persons (41 female, 8 male) explained their decision by individual answers. Four participants described their change of preference as a coincidence or as arising out of a certain situation, two respondents explained the emergence of their professional preference with regard to changing conditions on the labor market. For health reasons five persons were forced to make a change of preference. A total of six women indicated that their change of preference was related to their gender. Three of them named the incompatibility of career and family, three women mentioned reservations against female veterinarians in a particular field of work (farm animals).

The aspect of social security was mentioned once and economic aspects (particularly in terms of farm animal medicine) by five respondents. The specific physical and physiological stresses caused by the dominance of economic considerations and the necessity to treat the animals were mentioned in this context as well as the political and social pressure with regard to the livestock sector and the high level of bureaucracy. The animal owners and their expectations toward the veterinarians were named as a reason by three respondents, a fourth participant named this aspect in relation to a changed image of veterinary profession in society. Three respondents stated, not to have made a change of preference. Three answers were excluded from interpretation due to incomprehensibility.

**Figure 8: Changes in preferences in terms of the occupational activity (n = 194)**

n = 194; values in %	male	female
job security	22.22	13.86
difficulties in terms of business aspects	18.52	13.25
income	29.63	42.77
working hours	40.74	56.63
professional development / career	22.22	15.66
compatibility of work&family	59.26	56.63
experience&insight of not being suitable for this field of work	11.11	24.70
individual answers	29.63	24.70

### 4.3 The phenomenon of feminization

#### 4.3.1 Associations and attitudes caused by the phenomenon of feminization

In the last section of the questionnaire the respondents were asked to express their assessments to the various aspects of the phenomenon of feminization.

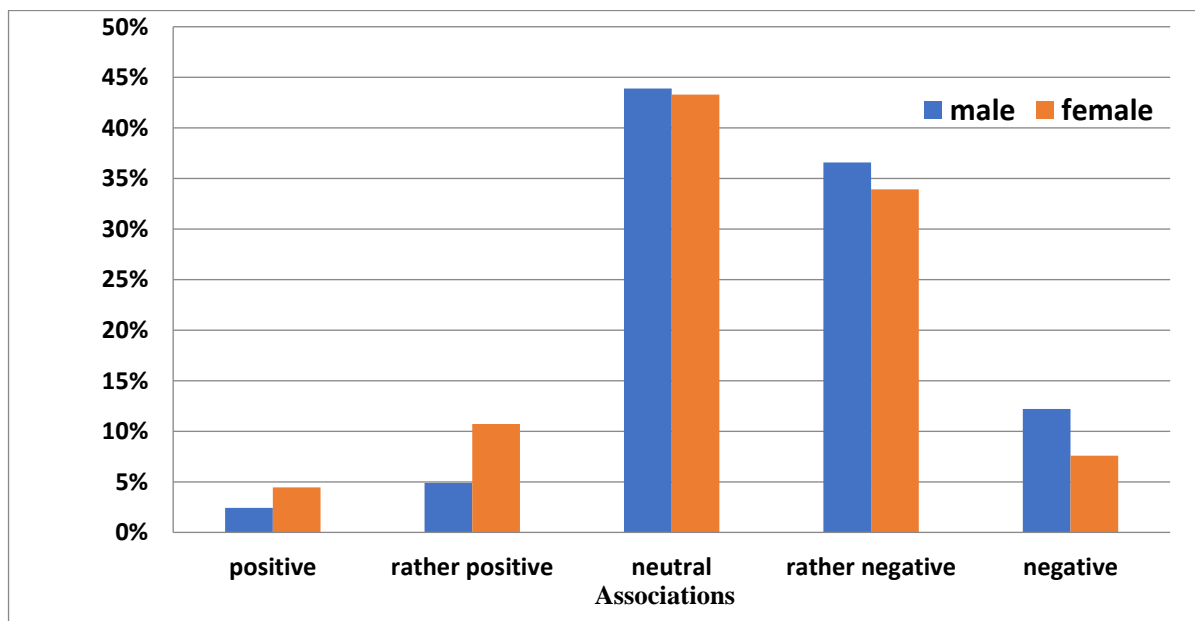
When asked, what associations the term “feminization” evokes in the respondents (n=266, 1 skipped, male 40, female 224), more than the half of the males (“rather negative”: 36.59%, “negative” 12.20%, summarized 48.79%) had negative associations and also only a minority of female respondents (15.17%) associated with the term “feminization” something positive (“rather positive” 10,71%, “positive” 4.46%) In order to simplify the presented results, the options “rather positive”/”positive” were summarized and presented as “positive”, and the options “rather negative”/”negative” summarized and presented as “negative” (Figure 9).

Relating these results to the age of the respondents, it became apparent, that the highest proportion of women, who had negative associations was found in the age group of 31-40 years (33.63%) and men in the age-group of 51-60 years (50%). The highest share of male (40.54%) and female veterinarians (41.18%) with positive associations was seen in the age group of 31-40 years (Figure 9, 10).

**Figure 9: Associations (male+female) in relation to age groups (n = 266)**

age group	positive (%)		negative (%)	
	male	female	male	female
19-23	5.41	5.88	0.00	0.88
24-30	21.62	17.65	0.00	12.39
31-40	40.54	41.18	10.00	33.63
41-50	18.92	20.59	20.00	16.81
51-60	13.51	14.71	50.00	28.32
61-70	0.00	0.00	15.00	7.08
70+	0.00	0.00	5.00	0.88

**Figure 10: Associations (male+female) in terms of feminization in relation to gender (n = 266)**



The respondents (n=259, male 40, skipped 1; female 218, skipped 6) then were asked about their assessment regarding the **attitude of animal owners** to feminization (**Figure 11**).

**Figure 11: Attitude of animal owners (male+female) (%) (n = 259)**

n = 259	not important	"in between"	less. import.	important	very import.
male	35.00	40.00	20.00	5.00	0.00
female	31.19	30.28	27.52	6.88	4.13

Looking at the respective proportion of male and female respondents, it got evident that the percentage of men who classified this aspect as clearly unimportant (35.00%) or “in between” (40%) (summarized 75%) significantly exceeded that of women (summarized: 61.47%). The same applies to the proportions of male and female respondents who considered this aspect important (38.53% (summarized: “relatively important”, “in between” to “very important”) female and 25% (summarized: “relatively important”, “in between” to “very important”) male respondents).

#### 4.3.2 The causes of feminization of veterinary profession

Subsequently the respondents (n=266, male 41, skipped 1; female224) were asked to comment on six statements concerning the causes of feminization of veterinary profession (multiple choice, free text-field).

Looking at the results (**Figure 12**) in terms of the respondents` gender, it turned out that the vast majority of male respondents considered the “numerus clausus”, the access criterion for veterinary study, as the main cause of feminization (85.37%), named by female respondents with a much less percentage (62.95%, ranked second). Slightly more than half of the men (51.22%) identified the overall social developments as the second most important reason for the significant gender shift, for women this aspect was only in third place in their weighting the causes of feminization (50.00%). A significantly higher percentage of female respondents (63.84%, first place) indicated that both genders differently assessed the aspects associated with their study and career choice, male respondents considered this reason as less important (48.78%, third place).

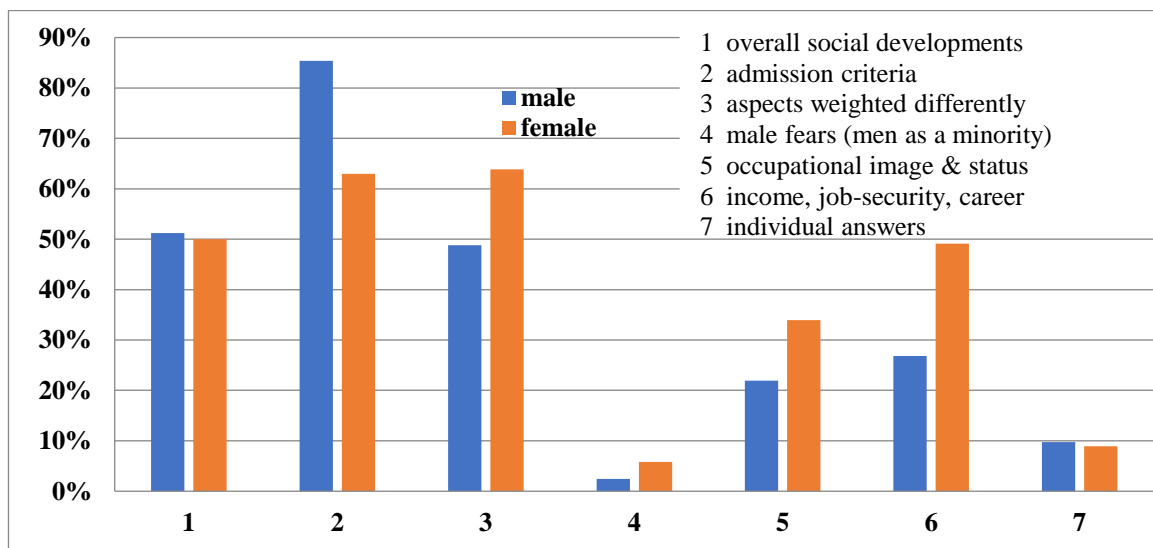
Differences regarding the evaluation of income, job security and career opportunities could be identified as well: In contrast to men from whom only a percentage of (26.83%) considered this aspect as important (fourth position), a significantly higher percentage of female respondents (49.11%) recognized this aspect as relevant. A higher proportion of female (33.93%) than male



respondents (21.59%) attached importance to the aspect of social status and occupational image in society. Of less relevance for both genders (male 2.44%, female 5.80%) was the statement that men, precisely because they are aware of their minority status in this field of science, refrain from taking up the study of veterinary medicine.

Three of the respondents using the possibility to answer individually attributed the changes in veterinary profession mainly to developments in society as a whole, being not limited to Europe. The focus of veterinary medicine, no longer primarily determined by the medical care of farm animals, became the field of small animal medicine due to a changed relationship to animals (two respondents). The latter in turn contributed to an increased emphasis of so-called “female attributes” such as “attention” and “care” (one respondent), leading to a change in occupational image (two respondents). This aspect of a changed relationship to animals is expressed in “love of animals (three respondents) and the “desire to help animals” (two respondents).

**Figure 12: “Feminization” of veterinary medicine: causes (n = 266)**



### 4.3.3 Changes of veterinary profession caused by feminization

The question, whether the feminization changed the veterinary profession, was affirmed by the vast majority (69.81%) of respondents (n=265, male 42, female 223). A percentage of 5.28% answered in the negative, a percentage of 24.91% was not able to judge.

Then the participants (n=207, male 36, female 170) indicated their agreement or disagreement with various aspects of the topic offered in 11 statements (“decline/negative development”, “no change”, “increase/positive development”) (shown in **Figure 13**), additionally individual answers were possible (free text-field).

A percentage of 85.29% male and 93.41% female respondents ranked the increase of the number of **part-time** employees being first of the perceivable consequences of feminization. In correlation, the decline of **full-time** employed veterinarians was identified as a consequence of feminization by a percentage of 91.18% male and 90.12% female respondents. A decrease in the number of practice or clinic owners was perceived by about two thirds of respondents (male 62.86%; female 65.58%).

A **decline of veterinarians in certain fields** of veterinary work could be identified by more than the half of participants (male 61.11%, female 53.94%). The share of those, who were able to recognize an “**oversupply**” of veterinarians in other fields of veterinary activity (e.g. small animal medicine especially in urban areas) added up to 42.86% male and 41.83% female participants, however, a percentage of 34.29% men and 43.14% female could not perceive any change.

Concerning the aspect of veterinarians` **social status and reputation** in society, the closer look at male and female respondents revealed differences in terms of both genders` assessment: in contrast to male respondents, from whom only a relatively small percentage identified a decrease in social status and reputation (8.57%), five times more women (41.98%) were able to recognize a status and reputation loss. The same applies to the aspect of job security, which was assessed differently by both genders: 68.57% of male and 49.83% of female respondents were not able to recognize any change concerning the security of jobs, 22.50% of the females recognized a deterioration in job security (male 14.29%). However, more female (28.13%) than male (17.14%) respondents recorded a positive development with regard to job security.

With regard to financial aspects the number of female respondents being able to recognize a negative development, exceeded that of male respondents (female 41.10%; male 33.33%).

A percentage of 61.11 % perceived the opportunities for continuing **professional development and career advancement** as unchanged, the percentage of women (57.86%) fell slightly below that of men. About one fourth of the respondents (male 27.78%; female 24.53%) perceived the opportunities for professional development and career even as developing toward the positive. The majority of the respondents (male 48.57%; female 73.29%) recognized an increase in **job changes** from curative practice to other areas of veterinary work, with the percentage of female participants far exceeding that of male respondents in their assessment.

Increased **job abandonment and migration to jobs outside the profession** were identified by the vast majority of respondents, with this being expressed by significantly more female (71.95%) than male respondents (52.78%). The proportion of men perceiving no change, was significantly higher (25.00%) than that of women (15.85%).

**Figure 13: Changes of veterinary profession (n = 207)**

values in % n = 207	decline / neg. development		no change		increase / pos. development	
	male	female	male	female	male	female
full- time jobs	91.18	90.12	2.94	8.02	5.88	1.85
practice owner	62.86	65.58	25.71	27.92	11.43	6.49
status, occupational image	8.57	41.98	88.57	50.00	2.86	8.02
shortage of veterinarians	61.11	53.94	19.44	13.33	19.44	32.73
income	31.33	41.10	41.67	36.81	25.00	22.09
job security	14.29	22.50	68.57	49.38	17.14	28.13
career / professional advancement	11.11	17.61	61.11	57.86	27.78	24.53
oversupply	22.86	15.03	34.29	43.14	42.86	41.83
leaving of the profession	22.22	12.20	25.00	15.85	52.78	71.95
job change	8.57	9.32	42.86	17.39	48.57	73.29
part-time jobs	8.82	2.40	5.89	4.19	85.29	93.41

Evaluating the individual answers concerning the present question, various aspects were named: A first aspect mentioned, was the aspect of animal ethics being emphasized more strongly (two respondents). A second aspect indicated, were working conditions of different kinds (financial conditions: wages, an increase of precarious employments, an increasing conflict concerning the willingness to pay with simultaneously increasing costs for medical services; the aspect of working hours: an increase in shift work and in veterinarians with “burn-out”; a shortage of veterinarians due to parental leave). Three respondents recognized the topics, mentioned in the statements given in this question, not as gender caused, but generational related. One participant perceived the increasing specialization of veterinary profession as opening up new flexible fields of activity as service providers for veterinarians in private practice.

#### 4.3.4 Gender specific aspects of feminization

The participants (n=263, male 39, skipped 2; female 223, skipped 1) were asked, whether and to what extent they were able to identify **gender specific differences** with regard to practicing veterinary profession (multiple choice, additionally free text-field).

The majority of respondents noticed gender specific differences (**Figure 14**) with regard to the aspect of simultaneous **management of career and family**. This aspect took first place in all respondents` assessments (male 53.85%, female 66.82%). In contrast to male respondents, who

were able to identify the second most important gender specific difference (41.03%) in the aspect of dealing with the **animal owners**, the questioned women rated this aspect as less important ranking it only sixth in their assessment (34.98%). Women saw an important gender specific difference in the **business** aspects and ranked it second (52.91%), whereas male respondents perceived a less significant difference in this aspect and weighted it equally important as the aspect of **personnel management**, the **handling of animals** and the aspect of the **working** atmosphere. Rated each with 33.33%, these aspects together took the fifth place of the male rating. In terms of **career** opportunities, the females recognized a third significant gender difference (46.64%), a significantly lower percentage of men (28.21%) attributed relevance to this aspect and ranked it in seventh position together with the aspects of **social competence** (28.21%, female 30.94%).

**Emotional** competence was perceived by both genders as a gender-specific difference, although the percentage of women (39.46%, fifth ranked) was significantly higher than that of men (30.77%, sixth ranked).

In their assessment of any gender differences, the male respondents attached particular importance to the issue of **physical and mental resilience** (38.46% - the third important gender specific characteristic, female respondents ranked it only eighth in their assessment (31.84%). A percentage of 20.51% male respondents were not able to identify any gender specific difference with regard to the practice of veterinary profession (female 13.90%).

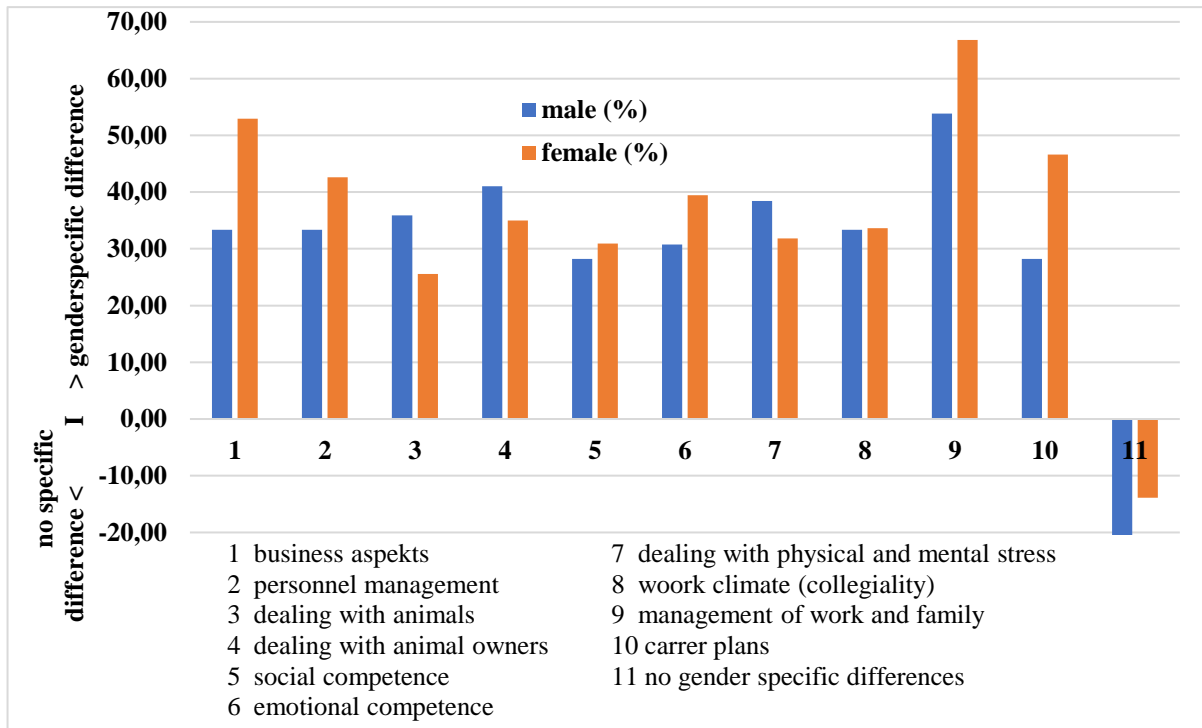
A percentage of 7.22% used the additional option of an individual answer. One answer was excluded from evaluation due to the incomprehensibility of its content.

Three respondents emphasized the individuality of each character independent of gender, other comments were related to business and financial aspects of the veterinary profession. In this context two respondents noted a lack of awareness of the financial value of their own veterinary performance.

Discrimination based on gender concerning the wages, the preferential hiring of men, the different assessment in exams and the different evaluation of the same behavior (four females) were also mentioned. Women are less likely to own their practices in contrast to men, who more often than women work in a permanent job (one female). Male veterinarians are more likely to go in specialisms such as surgery (one female) and are open for trying new methods for medical treatment and surgery, whereas women tend to work with what they have learned (two females). A lack of willingness on the part of female veterinarians to work in the large animal sector, to take on night and emergency services and to work full time was judged as a gender specific feature by one woman. A male respondent perceived a gender specific difference in terms of

setting error-preventing QM systems. A decrease in passion for the profession was noted by one male respondent.

**Figure 14: Gender-specific differences (n= 263)**



Subsequently the participants (n=262) were asked (open question) to indicate, which **gender specific feature** they perceived. After reviewing the various responses, they were assigned to different categories created by means of certain key words and subsequently weighted in order to gain the following described results.

**1. Profession and family** (key words: profession, family, (breastfeeding) mother, children, pregnancy) The topic of reconciling work and family life was given a high priority in the ranking of gender specific characteristics. 29 respondents stated, that women, in particular, are faced with the responsibility of combining both areas of work. The “classical image of family” is still valid, women carry a “double burden”.

**2. Part-time work:** Closely connected with this topic, is the issue of work structures, working conditions, and working times, which five respondents commented on. The need for part-time jobs and regulated working hours in order to be able to reconcile work and family or to balance work and life and moreover less emergency service were emphasized.

**3. Business and income aspects:** A huge number of respondents identified business or financial aspects ( main key words: business (6x), income, salaries (22x), fees for services (2x), gender pay gap (explicitly 2x), difference in salaries (4x) as gender specific features, which they perceived clearly and the ability, attributed to males, to negotiate salaries successfully (2x).

**4. The opportunity gap:** Likewise the opportunity gap was named as a significant gender specific characteristic (key words: career (10x), career plans (6x), leading or higher positions (2x), practice owners (1x), managers (1x) and promotion prospects (3x)). In the perception of the respondents, leading positions were preferably given to men, who are likely to be considered as potential successors by male bosses (one female). Men were perceived as more career-oriented and more confident in negotiations than women, who are more willing to forego the assertion of their rights and are more likely to be exploited than men (2x).

**5. Emotional (empathy):** The emotional competence was perceived as a gender specific difference (7x) (“key word “empathy”). An empathic dealing with animals was noticed as a feature attributed to female veterinarians as “soft doctors” for pet animals (3x). Likewise in this context the emotional incompetence in terms of dealing with animals and humans was stated as a gender specific characteristic (1x) obviously attributed to men.

**The social competence:** was also identified as a gender specific characteristic (3x). In this context the personnel (3x) and the practice management (1x), collegiality (2x) the ability to work in a team (2x) and working climate were named. Two respondents (male, age group 51-60) perceived a decrease in the sense of responsibility and a reduced professional engagement. Physical and emotional resilience was also identified as a gender specific feature (2x).

#### **6. Discriminating behavior towards female veterinarians or veterinary students**

The preferential treatment of men already during study (2x), a lack of understanding for the double burden of female colleagues (1x), the necessity as a young female veterinarian to first of all have to prove her competence that is immediately attributed to males (1x) or psychological violence on part of the pet owners (1x) against women and farmers` dealing with female veterinarians (1x) were experienced as gender specific characteristics attributed to men.

#### **4.3.5 Exclusion or preference of certain fields of veterinarian work as a consequence of feminization**

Asked to comment on eight statements concerning possible causes of favoring or excluding a particular area of work e.g. the shortage of veterinarians in the field of farm animal medicine (**Figure 15**), male and female respondents (n=262, male 40, skipped 1; female 221) agreed on the aspects, they named as the two most important reasons for preference or exclusion of a special field of work: the compatibility of occupation and family responsibilities (ranked first, male 80.00%; female 76.47%) and the working conditions (ranked second by male 67.50%; female 62.90%). Men ranked the public perception and debates about factory farming third together with the aspect of feminization (37.50%), followed by the aspect of a lack of agricultural knowledge and deeper experiences (fourth position, 35%) and special ethical

challenges (fifth position, 27.50%). Females rated these aspects (lack of agricultural knowledge, the public perception of industrial livestock farming and ethical challenges) almost equally (about 32-34%). A significant difference in assessment consisted in terms of “feminization” as a cause of exclusion or preference: more than twice as many men as women considered feminization as a cause (male 37.50%, female 14.03%).

**Figure 15: Reasons for exclusion or preference of a particular area of work (n = 262)**

<b>n = 262</b>	<b>male (%)</b>	<b>female (%)</b>
<b>feminization of profession</b>	<b>37.50</b>	<b>14.03</b>
<b>working conditions</b>	<b>67.50</b>	<b>62.90</b>
<b>Public perception of industrial animal husbandry</b>	<b>37.50</b>	<b>34.39</b>
<b>compatibility work / private life</b>	<b>80.00</b>	<b>76.47</b>
<b>particular ethical / moral challenges</b>	<b>27.50</b>	<b>32.58</b>
<b>lack of agricultural knowledge</b>	<b>35.00</b>	<b>34.84</b>
<b>individual answers</b>	<b>12.50</b>	<b>10.86</b>

The individual answers (11,07%) considered mainly three aspects as causes of exclusion: financial aspects: income (8x), followed by the living conditions in the countryside (4x), and the working conditions: strenuous physical work (3x), working hours (2x), permanent on-call duty with bad work-life balance (1x); discrepancy of therapy and profitability (2x); legal requirements accompanied by too much bureaucracy (2x); discrepancy between legal framework and professional reality and work climate due to an outdated personnel management by male practice owners (1x) and a lack of acceptance of female competence by employers and animal owners (1x).

#### **4.3.6 Discrimination based on gender and the struggle for recognition and respect.**

Asked about, whether the respondents (n=263, male 41, female 221) have experienced discrimination based on gender in their studies or profession, only one fifth (19.51%) of the male respondents had made such experiences of discrimination, but a high proportion of female respondents (57.01%). Then only females should take a “yes” or “no” position to the question of whether they had experienced gender-specific disadvantages in terms of realizing career plans. More than half of the females (56.31% of n=223) answered this question in the affirmative, a percentage of 43.69% declined.

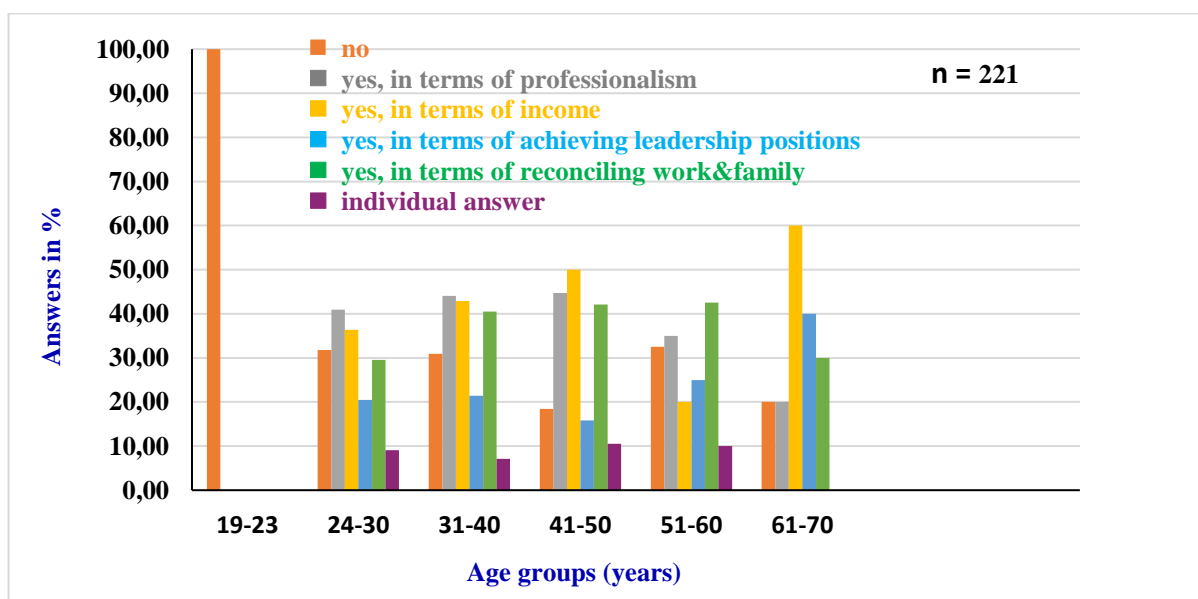
Subsequently females (n=221) were asked, whether they had struggled for recognition and respect in their studies or profession by indicating them according to four different aspects of

their professional activity (multiple choice, additionally option of individual answer). The results are presented in **Figure 16**.

About one third (29.86%) answered this question in the negative. With regard to the degree of their professionalism, the female respondents answering the question in the affirmative, experienced most struggle for recognition in terms of their professionalism (42.08%), followed by negative experiences with regard to salary (37.56%) and the necessity of having to reconcile work and family life (36.65%). Only one fifth mentioned the struggle in terms of their opportunities of maintaining management positions (20.81%).

A closer look at the different age groups (**Figure 16**) showed that there were mainly three problem areas: income, professionalism and the necessity to reconcile professional duties with private responsibilities. The aspect of the compatibility of profession and family took a similarly high position in the three age groups between 31 and 60 year old female respondents. The **income** was also considered relevant as a measure for recognition of their professional performance but differently weighted (highest percentage (50%) in age group 41-50 years). With regard to their struggle for recognition in terms of their **professionalism**, the women aged between 61-70 years weighted this aspect of their experiences significantly higher (60%) than other age groups. The aspect of career opportunities was the least important. One-fifth of the 61-70 year old (20.00%) and almost one fifth of the 41-50 year old (18.42%) women stated, that they had not made any negative gender specific experiences, in the other female age-groups the percentages amounted to about 30-32%.

**Figure 16: Women`s struggle for recognition and respect (n = 211 women)**





The individual responses (18 of 221 in total) confirmed the above mentioned results. Three female respondents reported negative experiences concerning their responsibility to carry out their professional work and family obligations, in one case the possibility of a future pregnancy already led to a preference for a male colleague. Prejudices against women with regard to their suitability for large animal medicine were experienced by four females and in principle better evaluations and grades for men already at university by three women. Two female respondents reported of the necessity to acquire confidence as a female veterinarian. As a non-gender specific issue, one female participant characterized the experience to have to acquire recognition, because this would apply to all young professionals and after any job change.

#### 4.3.7 The future of veterinary profession

Looking to the future of veterinary medicine in Germany, the participants (n=264, 41 male, 222 female) were asked, how they thought feminization would affect the veterinary profession in the future. Expressing their own attitude towards seven aspects of the topic by means of ranking on the Likert scale (“positive/rather positive” summarized as “positive”; “unchanged/neutral”; “rather negative”/“negative” summarized as “negative”), the male and female respondents showed different assessments concerning the future development of the profession (**Figure 17**).

**Figure 17: Impacts of feminization in the future (n = 264)**

n = 264 values in %	POSITIVE			NEUTRAL			NEGATIVE		
	in total	male	female	in total	male	female	in total	male	female
work structures/organization	71,17	41,5	71,82	18,7	22	18,18	14,12	36,95	10
compatibility of work+family/private life	82,2	68,3	84,68	9,09	19,5	7,21	8,71	12,2	8,11
balanced supply of all areas of veterinary tasks	14,61	4,88	16,52	37,31	37	37,61	48,08	58,54	45,87
willingness to work in this profession for life	6,54	0	7,8	38,85	31,7	40,37	54,61	68,29	51,84
public perception of veterinary profession in its importance of society as a whole	21,23	14,6	22,58	59,85	78,1	56,68	18,92	7,32	20,74
overcoming gender specific differences in terms of salaries and opportunities	47,88	36,6	50,23	31,27	41,5	29,03	20,85	21,95	20,74
future viability of the veterinary profession	32,3	24,4	33,96	49,81	43,9	50,7	17,9	31,71	15,38

In terms of work structures and work organization female respondents were much more positive about the future than the male participants (71.82%), whereas the percentage of men assessing this aspect positively was 41.46%. In correlation to this rating, three times as many men as

woman assigned the future development of work structures to be in the range from “rather negative” to “negative” (35.00%, female 10,00%). Likewise the future compatibility of profession and family/private life was seen much more positively by female respondents (84.68%) compared to the men (68.29%). The proportion of men, marking the future compatibility of career and family as “unchanged/neutral”, was almost three times as high as that of women (female 7.21%, male 19.51%). The percentages of negative assessments made by men and women with regard to the future, did not differ that much (male 12.20%, female 8.11%).

Only very few female (7.80%) and none of the male respondents (0.00%) estimated the willingness of veterinarians to work in their profession for life as positive. In contrast, about the half of female (51.84%) and 68.29% of the male respondents rated the future negative.

Future changes in terms of the public perception of veterinary profession in its importance for society as a whole, were also not expected by the vast majority of both genders (male 78.05%, female 56.68%). Nearly three times as many women (20.74%) as men (7.32%) assessed the future development of this aspect as negative. Overcoming gender-specific differences was viewed positively with regard to the future by about half of the women surveyed (50.23%) and a percentage of 36.58% of men. (male 37.50% “positive” to rather “positive”). Male respondents saw the future development in comparison to female respondents without a change to be expected with this regard (male 41.46%; female 29.03%). 24.39% men had a “positive”/“rather positive” view of the future of veterinarian profession, the number of women positively assessing the future viability was significantly higher (female 33.96%).

Finally the participants (n=265) were asked, which of the mentioned aspects they thought needed to be changed, so that women and men would continue to be willing to choose this profession and work in it throughout their lives. (seven statements, multiple choice, free text field). As shown in **Figure 18**, the highest priority was given the compatibility of work and private life/family (87.7% in total), closely followed by working conditions/organization of work (86.04% in total) and the aspect of income (80.38% in total). On fourth place of aspects to be changed in the future was the appreciation of veterinary profession in society that is aware of the profession`s importance for society as a whole (59.62% in total). The aspect of charges was perceived as relevant in view of the future by a proportion of 43.40% of respondents. A percentage about 30% each recognized a need for change with regard to job security (30.57%) and career and further training opportunities (27.55% in total).

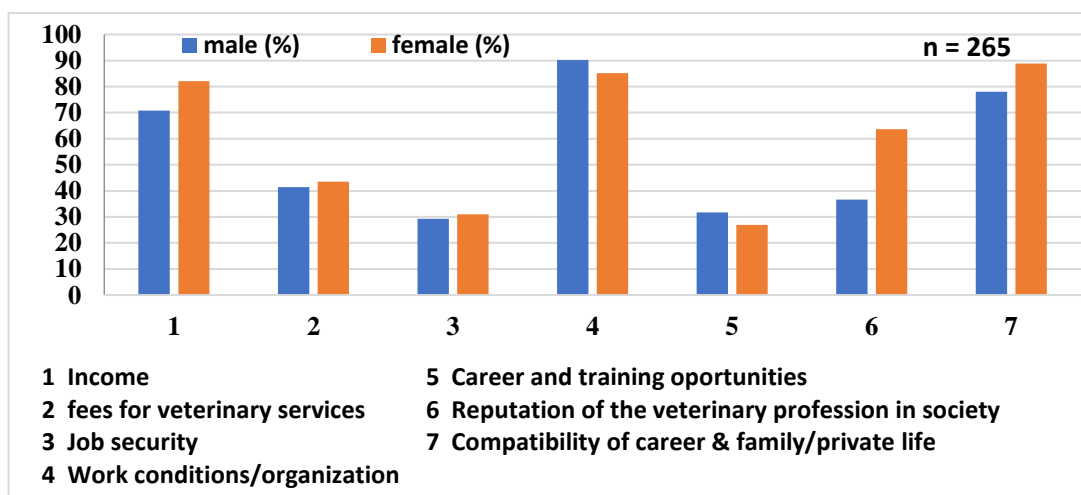
The individual responses categorized according to thematic aspects (key terms) confirmed the numerical results. The fundamental importance of the above mentioned three highest prioritized

aspects was emphasized: work conditions allowing the compatibility of career and family or private life, an income commensurate with training, and job security as a basic condition for the future viability of veterinary profession, that continues to need sufficient applicants (one answer, female, age group 31-40).

The issue of gender was explicitly taken up by three respondents with regard to gender language. One male respondent considered the gender issue to be overrated, gender specific problems did not exist with the exception of an employment ban in case of pregnancy, which, however, required a political solution (male, age group 61-70). In the context of this gender topic, equal rights and justice between female and male veterinarians were demanded by both male and female respondents, and this with regard to the need for reconciling work and private life (better working time models and the willingness to employ mothers) and career opportunities. Female veterinarians' difficulties in coping with both career and family tasks were emphasized as the "main problem" for women, a "burden" that had to be shared by as many persons as possible. The aspect of **admission criteria** was addressed by five participants, who called for a rethinking of the existing criteria ("numerus clausus"), three of them suggested a quota for men, Two participants called for **political solutions** with regard to this aspect.

The profession of a veterinary surgeon is not a job, it is a vocation, Without this vocation it is not possible to practice for a life-time. With this statement a male respondent (age group 61-70) expressed, what he believed, is the foundation of veterinary profession, that carries beyond the present into the future.

**Figure 18 Aspects to be changed in future (n = 265)**



## **5 Discussion and conclusions**

Based on the statistically proven fact, that as a consequence of a development for decades, veterinary profession is numerically feminized, this study highlighted the complex inter-relationships between profession and gender in order to clarify whether and to which extent veterinary profession remains an inherent masculine project (Britton 2000; Irvine and Vermilya, 2010) by evaluating whether, in which regard and to which extent, feminization has changed veterinary profession during the last twenty years in Germany. In this context also the question was addressed, whether and to which extent, the identified changes are caused by gender or are more generational related (Rucker, 2002). By means of these in the introduction already mentioned and in the context related literature established hypotheses, the results of the present survey were interpreted and assessed.

Unfortunately the number of participating veterinarians and veterinary students was comparatively small, so that comparisons to other studies on the subject of feminization or subject related issues can only be made with reservations and do not claim to be exhaustive. Nevertheless an attempt will be made to consider the topic under discussion in as many different ways as possible.

### **5.1 Motives of the choice of studies and profession and its impact on profession**

The evaluation of the motives mentioned by male and female respondents showed a clear affinity for animals, although both genders weighted this affinity differently. None of the participants started his veterinary studies without an affinity for animals.

Although both genders differed in the assessment of the relevance of their motives for their choice of study and career, the intention to provide animals with medical help by means of the scientific knowledge and the motive to enjoy dealing with them was given high priority in the ranking of motives. In contrast to this, other aspects, that also should be considered, when choosing a profession, were less valued. Almost no importance was attached to an income, which is needed to earn a living and is commensurate with the training and the performance of this profession (“very important”: male 2.44%, female 1.80%). Thus, it is a high intrinsic motivation, that moved young people to want to take up this profession, which apparently was scrutinized only in later years. Asked about for which reasons they had changed the originally chosen professional preference (4.2.4, Figure 8), financial aspects were cited by 40.72% of all

participants as the second ranked reason. Regarding the decision to reorient themselves, female women (42.77%) attached considerably more importance to this aspect than men.

These results confirm the thesis formulated by several authors, that men and women differ in their motivation to take up this study insofar as the emotional component, the nurturing and caring side of veterinary profession (Irvine and Vermilya, 2010, Baumgärtel, 2016) is more strongly emphasized by women than by men, who to a greater degree emphasized the scientific aspect. It can be assumed that women in contrast to men, have a stronger altruistic tendency (Horvath et al., 2021). But despite the differences in emphasis, there is a fundamental agreement of both genders in such aspects that they ultimately consider crucial for their choice of study, because giving meaning to their later profession.

In correlation to the emotional component in the female decision-making process for career choice are the results with regard to gender specific features, the participants were able to identify due own experiences (4.3, Figure 14). The emotional factor, making the veterinary profession for a lot of women to their “dream job” (Baumgärtel, 2016) and often expressed as an emphatic dealing with humans and animals, was mainly attributed to women, This aspect, however, was not only considered positively, but also critically reflected upon with regard to its consequences in terms of other aspects being relevant for the exercise of profession. Several participants (individual comments, 4.3.4) established a connection between this emotional component as early as the career choice stage, which then is continued and reflected in the way of dealing with the objective criteria and the hard facts determining the veterinary profession (business aspects, working conditions, working times). It is reasonable to assume, that the particular weighting of motives decisive for the choice of career that reveals a respectable degree of idealism, contributes to the acceptance of conditions in terms of salaries, working times and social status, that are not in line with male and female veterinarians` needs.

## **5.2 The financial aspects of the veterinary profession and the gender pay gap**

Looking at the feminization in terms of its implications for the wages, the results bring to light an astonishing development regarding the respondents` attitude towards the wages paid to them. In contrast to their attitude during their decision-making process career choice, when they appeared not to place income high enough on their list of motives, this attitude obviously changed at a later point of their professional development.

Asked about, which of the aspects concerning the practicing of their profession has to be changed in future (4.3.7, Figure 18), so that women and men would continue to be willing to

choose this profession and work in it throughout their lives, a vast majority of study participants named financial aspects such as income (80.38%) and fees for veterinary services (43.40%). This result allows to draw the conclusion, that the earned incomes do not correspond to the salary expectations of veterinarians. This in turn could contribute to the fact that men increasingly refrained from choosing veterinary profession (Horvath et al., 2021). At the same time this assessment concerning the willingness to work in this profession throughout their lives, is an indicator of declining job satisfaction, an alarming development with regard to the future of the veterinary profession with its undeniable relevance for society as a whole.

An income commensurate with training was mentioned as an important factor, not only with regard to the need to secure a livelihood even beyond working life, but also as an expression of the appreciation of veterinary performance and professionalism. The latter aspect was especially named by female respondents, who named negative experiences with regard to salary (37.56%) as the second important indicator for the lack of recognition and respect in their professional practice. Income among several other factors was considered relevant as a measure for recognition of their professional performance (4.3.6, Figure 16).

Asked about the gender specific feature they could perceive, a huge number of respondents indicated business aspects (4.3.4, Figure 14) and especially the difference in salaries. The causes of this gender pay gap were assessed by women as an expression of discrimination based on gender and the ability of men, being more career orientated, to negotiate more vehemently and successfully an adequate income (4.3.4, individual comments).

A closer look at the results concerning the gender specific differences perceived in the context of feminization (4.3.4, Figure 14) completed by the individual comments given to the open question, which gender specific feature they were able to perceive most clearly, the problem of reconciling work and family was given highest priority in the ranking of gender specific characteristics. According to the respondents' assessment, women in particular bear the responsibility for reconciling both areas of work. As a consequence women often work in part-time, change their field of work or give up their occupation for a certain period of time in favor of their family, an assessment of study participants proven by statistical data and previous studies. Asked, in what respect they experienced a struggle for recognition and respect (4.3.6, Figure 16) over one third of women (36.65%) indicated again experiences with regard to the particular necessity of having to reconcile professional duties with private responsibilities.

### **5.3 The opportunity gap**

As closely connected with the necessity of combining both career and family, the opportunity gap experienced particularly by female veterinarians were perceived as a significant gender specific characteristic (4.3.4, Figure 14). The individual comments confirmed the thesis repeatedly uttered in the context related literature, that women show a greater willingness to forego their own career plans in favor for family tasks and therefore even though they are highly educated, forego leading positions, work in part-time jobs and are more likely to practice in female specialisms (companion animals) rather than in mixed or large-animal practices (Irvine and Vermilya, 2020). As a consequence of their work in subordinate professional positions they are satisfied with lower pay resulting in lower retirement provision and a lack of career progression, which points to numerous gendered barriers to female veterinarians' occupational pathway.

### **5.4 Generational influences**

There is no question that with the generational shift in society life concepts and life goals, ethical values and the value placed on professional work have changed. The concept "living while working", the concept of the work-force "generation Y" (1981-2000) is a societal reality influencing the veterinary profession as well as other professions (Kersebohm, 2018).

This generational impacts, the veterinary profession is confronted with, became evident evaluating the various experiences and assessments of the study participants, when the imbalance of work and free time for family and recreation repeatedly was mentioned. Asked to comment on possible causes of favouring or excluding a particular area of work (4.3.5), both genders agreed on two aspects that they named as the most important reasons for preference or exclusion of a special field of work: the compatibility of work and family or private life ("work-life-balance", male 80%, female 76.4%) and the working conditions (male 67.50%, female 62.90%). Respondents, answering individually, uttered the desire for secure and predictable working conditions and explicitly mentioned a bad work-life balance. In several contexts the need for an employee related discussion concerning working hours and work conditions were named (comments 4.2.4, 4.3.3, 4.3.4, open question). Undeniable the aspect of a satisfactory work-life balance is also related to this generational change associated with a change of role models. Women as well as men have not only the desire, but also the right of choosing their model of life and family would like to have in coordination with their professional requirements.

## 6 Summary

The veterinary profession in Germany is influenced by a variety of societal changes, and characterized by a high proportion of female veterinarians (63.28% in 2020/21). Due to feminization the veterinary profession faces great challenges posed on it by both a gender and a generation shift in society.

The aim of my study was to survey the most important opinions of veterinarians and veterinary students on causes, relevance and impact of feminization on the veterinary profession in Germany by combining a sociological and a gender perspective in evaluating the participants' experiences and assessments.

By means of SurveyMonkey an online questionnaire containing 23 questions was designed and filled in between May 4. and September 3. 2021 and 266 filled questionnaires were available for evaluation. The participants' (veterinarians, students of veterinary medicine) motives being decisive for their career choice, their assessment regarding income, career chances and the compatibility of work and family or private life as well as regarding the surplus of veterinarians in some fields of veterinary practice and a shortage of veterinarians e.g. in farm animal medicine were surveyed and analyzed by the statistical program provided by SurveyMonkey. The feminization of the profession was mostly viewed critically (male 48.79%, female 41.52%). Only a minority of the respondents estimated the willingness to work in this profession for life as positive (7.80% female, 0% male). Four aspects turned out to be most impacting the profession and should be improved in future: the work-life balance, the income, the working times and the public perception of veterinary profession. The highest priority was given the compatibility of work and private life or family (87.7%), closely followed by the aspect of working conditions and work organization (86.04%) and the aspect of income (80.38%). On fourth place of aspects to be changed in the future was the appreciation of veterinary profession in society that is aware of the importance of this profession for society as a whole (59.62%). Job security (30.57%) and career opportunities (27.55%) were lower weighted topics. The feminization coexists with inequalities especially with regard to womens' responsibility for reconciling professional and private tasks and was assessed as the main gender specific difference in practicing the profession (male 53.85%, female 66.82%). Inequalities in career chances were mentioned by a percentage of more than half of the female respondents (56.31%) and inequalities in salaries by more than a third of female veterinarians (37.56%).

The results indicated a general consensus on the effect of feminization and suggest improvements in compatibility of work and private life, as well as salaries and working times.



## 7 Összefoglalás

A németországi állatorvosi szakmát számos társadalmi változás befolyásolja és a női állatorvosok magas aránya jellemzi (63,28% 2020/21-ben). A feminizáció miatt az állatorvosi szakma nagy kihívásokkal néz szembe, mind a nemek arányának eltolódása mind a generációváltás miatt.

Tanulmányom célja az volt, hogy felmérjem az állatorvosok és állatorvostanhallgatók véleményét a feminizáció okairól, jelentőségéről és hatásáról az állatorvosi szakmára Németországban, úgy, hogy ötvözöm a szociológiai és nemi perspektívákat a résztvevők tapasztalatainak és véleményének értékelése során.

A SurveyMonkey segítségével egy 23 kérdést tartalmazó online kérdőívet állítottunk össze, amit 2021 május 4. és szeptember 3. között tölthettek ki a válaszadók. Összesen 266 kérdőívet töltöttek ki megfelelően és állt rendelkezésre az értékeléshez. A résztvevők (állatorvosok, állatorvostanhallgatók) pályaválasztásukat meghatározó motivációit, a jövedelemmel, a karrierlehetőségekkel, a munka és a családi vagy magánélet összeegyeztethetőségével, valamint az állatorvosi praxis egyes területein tapasztalható állatorvos-felesleggel és az állatorvoshiánnyal (pl. a haszonállat-gyógyászatban) kapcsolatos értékelésüket a SurveyMonkey által biztosított statisztikai programmal elemeztük ki.

A szakma elnőiesedését többnyire kritikusan ítélték meg (férfiak 48,79%-a, nők 41,52%-a). Csak a válaszadók töredéke mutatott hajlandóságot, hogy ebben a szakmában akarnak egy életen át dolgozni (nők 7,8%-a, férfiak 0%-a). Négy szempont bizonyult a szakmát leginkább befolyásoló és a jövőben javítandó tényezőnek: a munka és a magánélet egyensúlya, a jövedelem, a munkaidő és az állatorvosi szakma megítélése a közvéleményben. A legmagasabb prioritást a munka és a magánélet/család összeegyeztethetősége kapta (87,7%), amelyet szorosán követett a munkakörülmények és a munkaszervezés (86,04%), valamint a jövedelem (80,38%). A negyedik helyen a jövőben megváltoztatandó szempontok között az állatorvosi szakma megbecsülése állt a társadalomban, hogy legyen mindenki tisztában a szakmánk fontosságával a társadalom egésze számára (59,62%). A munkahely biztonsága (30,57%) és a karrierlehetőségek (27,55%) alacsonyabb súllyal estek latba. A nőiesedés egyenlőtlenségekkel jár együtt, különösen a szakmai és magánéleti feladatok összeegyeztetésének női felelőssége tekintetében, és ezt a szakma gyakorlásában a fő nemi sajátosságokra jellemző különbségként értékelték a válaszadók (férfiak 53,85%-a, nők 66,82%-a). A női válaszadók több mint fele (56,31%) említette a karrierlehetőségek egyenlőtlenségét, a női állatorvosok több mint harmada (37,56%) pedig a fizetések egyenlőtlenségét.

Az állatorvos-társadalom elnöiesedése általános hatásának megítélésében konszenzus volt a válaszadók között, és fontos tartották a munka és a magánélet összeegyeztethetőségének, a munkaidő-beosztásnak és a fizetéseknek a javítását.

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Date: Budapest, 06.03.2023

Ruth Saur

*Ruth Saur*.....

Student name and signature



### Thesis progress report for veterinary students

Name of student: Ruth Saur

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Thesis title: **All gender issues? How women are affecting the veterinary profession in Germany - A review of the past 20 years**

#### Consultation – 1st semester

Timing				Topic / Remarks of the supervisor	Signature of the supervisor
	year	month	day		
1.	2020	10	19	Introduction to the topic (different aspects of the topic etc.)	<i>E. Diez</i>
2.	2020	12	12	First literature survey	<i>E. Diez</i>
3.	2020	12	21	preliminary bibliography	<i>E. Diez</i>
4.	2021	01	06	elaboration of the questionnaire, structure/first outline of the TDK	<i>E. Diez</i>
5.	2021	01	08	Material and methods (target group, way of conducting the survey, statistical analysis)	<i>E. Diez</i>

Grade achieved at the end of the first semester: ..... <sup>4</sup> .....

#### Consultation – 2nd semester

Timing				Topic / Remarks of the supervisor	Signature of the supervisor
	year	month	day		
1.	2021	02	23	final version of the questionnaire and the introduction	<i>E. Diez</i>
2.	2021	03	07	preparation of the online survey - call for participation in the study	<i>E. Diez</i>



3.	2021	07	16	first review of received completed questionnaires	<i>Diels</i>
4.	2021	08	06	revision of introduction and literature review, first results of the survey	<i>Diels</i>
5.	2021	08	21	evaluation of the questionnaire - results and abstract	<i>Diels</i>

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The thesis meets the requirements of the Study and Examination Rules of the University and the Guide to Thesis Writing.

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