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# Frequency of Burnout in the Swiss Farming Sector

Author Linda Reissig



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2

## **Table of Contents**

Summ	nary	4
1	Introduction	5
2	Materials and Methods	6
3	Results	7
3.2	The frequency of burnout disorders	7
3.3	Burnout and farm characteristics	8
3.4	Burnout and sociodemographic variables	
4	Discussion and Conclusion	
5	References	14
6	List of Figures and Tables	

### Summary

The disorder burnout in the Swiss farming sector is discussed with increasing frequency in the agricultural press, although there have been no empirical studies on the phenomenon to date. In 2016, 4000 Swiss farmers of both sexes were invited to complete a questionnaire, the aim of which was to investigate the frequency and causes of burnout in the Swiss farming sector. The study shows that burnout affects around 12% of the surveyed farmers. Chief among the farm and household characteristics identified as influencing factors and investigated here were financial situation, region, number and type of task areas for which the individual is responsible, and place of residence of the parental generation, as well as sex and age. These factors never operate in isolation and must always be considered in context, since burnout is always caused by multiple factors. The study is the first to provide data on the frequency of burnout in the farming sector, whilst simultaneously highlighting the need for action – in particular, the need to recognised burnout at a sufficiently early stage.

### **1** Introduction

Burnout disorders in the world of business have been receiving a great deal of attention for years, but for some time now this topic has also been cropping up more and more frequently in the agricultural press (e.g. Scherrer and Galbusera 2015), usually in the form of case histories. According to Igic (2015), burnout symptoms exist in 6.1% of the Swiss population as a whole. A study conducted in Germany also identifies the frequency of burnout in the general population at 6% (Stöbel-Richter et al. 2013). In Switzerland, no empirical studies have been conducted to date on stress in farming, even though knowledge on the subject would enable the development of targeted action measures, e.g. counselling. Even in the international context, studies on this occupational group are rare (Lourel and Mabire 2008; Kallioniemi et al. 2016). The definition of burnout needs to be analyzed for our research. First, a clarification of terminology: from a psychological perspective, depression is a de-fined psychological diagnosis according to the tenth revision of the International Classification of Diseases (ICD-10) of the World Health Organization WHO (Code F32: Depressive Episode; Code F33: Recurrent Depressive Disorder (Dilling 2014), whilst 'burnout' does not constitute an official diagnosis (Jaggi 2008). Since the terms are often used synonymously in the farming context and a conclusive distinction is not possible (Jaggi 2008), depression and burnout were investigated jointly in this study.

Burnout usually begins, creeping and unnoticed, with heightened stress. Untreated, it develops into a socalled 'burnout spiral' (Burisch 2005). The latter begins with chronic stress, along with a strong drop in performance, and hence less confirmation of one's own abilities and a loss of self-esteem, leading to insomnia, loss of social contacts, and even serious mental and physical disorders, and in the worst-case scenario, suicide.

Prevention is important. At an early stage, there are many possible courses of action. Those affected are dependent upon the feedback of people in their environment. Here, the structure of the Swiss farming sector is shown to be a risk factor: on family farms, both male and female farmers work mainly on their own, and the only possible 'mirror' for feedback is the family. The impairment to health can for its part lead to psychosocial and financial problems. In the farming context, this means that when one person falls ill, other people – especially the other family members – must take on his or her tasks. This puts them at risk of suffering burnout themselves, which has consequences not only for the farm, but also for society at large. A study conducted by the Swiss State Secretariat for Economic Affairs (SECO) showed in 2002 that the Swiss economy loses CHF 4.1 billion (1.2% of the gross domestic product) annually because of absence from work owing to stress disorders (Ramaciotti and Perriard 2003). The cost paid by farming as a conse-quence of burnout and depression are not currently known.

This study answers the question of how widespread burnout is in the Swiss farming sector, and what factors have an influence on this. The focus here is on farm and family characteristics, as well as on sociodemographic variables.

### 2 Materials and Methods

In a Switzerland-wide survey of 4000 farmers and their partners via an online or written questionnaire, data on the frequency and distribution of burnout as well as possible causal factors were for the first time gathered in a cross-sectional study. A number of expert interviews were conducted whilst the questionnaire was being developed. The questionnaire was validated using a pre-test with farmers. The address details of those surveyed were drawn according to the principle of random selection from the Federal Office for Agriculture's agricultural policy information system FSS. The individuals contacted were requested in writing to take part in the survey online. The person (farm manager or his/her partner) whose birthday was next was meant to complete the questionnaire. Out of 4000 surveyed farmers and their partners, 1358 filled in the questionnaire, and were included in the evaluation after the plausibility check. This corresponds to a very good response rate of 34%.

The questionnaire was based on a standardised tool for measuring psychological burn-out as well as on a questionnaire, developed in-house, on farm and household variables, and on the possible reasons for burnout. The survey also contained several standardised questions for measuring state of health and personality, but which were not incorporated in this evaluation. The German version of the Copenhagen Burnout Inventory with the cut-off for burnout according to Stöbel-Richter et al. (2013) – a self-assessment questionnaire – was used (see information box). The extent of the participants' burnout was evaluated according to the reference values of the Freiburger Forschungsstelle für Ar-beitswissenschaften GmbH (= Freiburg Research Centre for Occupational Sciences GmbH (FFAW)) (see information box).

The collected data were analysed with SPSS 24.0 Statistics Software. Descriptive anal-yses were made by means of contingency tables, and Kruskal-Wallis tests (H-tests) were used to check whether various farm and household variables as well as a number of sociodemographic variables differed significantly in terms of their degree of exhaustion.

#### Copenhagen Burnout Inventory and cut-off score

In this study, the *Copenhagen Burnout Inventory (CBI)* was used to record physical and mental exhaustion (Stöbel-Richter *et al.* 2013). Six individual questions (*items*) were asked: "How often do you feel tired / physically exhausted / emotionally exhausted / drained / weak / prone to illness?" as well as "How often do you think 'I can't go on any longer'?" The answers were recorded on a five-point Likert scale, with 1 = "never" / "almost never", 2 = "rarely", 3 = "sometimes", 4 = "often" and 5 = "always". The authors describe this cut-off as follows:

"In order to determine the percentage of people in the general population suffering from exhaustion, we applied the criterion that those affected would answer with "often" (4) or "always" (5) for at least four of the six items, i.e. the cut-off score was stipulated from content-based perspectives" (Stöbel-Richter *et al.* 2013, p. 112). The Freiburger Forschungsstelle für Arbeitswissenschaften GmbH (Freiburg Research Centre for Occupational Sciences (FFAW)) calculates reference scores. For this, it always performs a transformation of the scores on a scale of 0 = "never" to 5 = "always". According to these reference scores, the extent of exhaustion is above-average if a score of 62.5 is obtained. This reference score matches the cut-off determined by Stöbel-Richter *et al.* (2013). Thus, in the present study, we speak of a risk of burnout – in which the affected individual suffers from physical and mental exhaustion – with a score of 62.5 onwards.

### 3 Results

#### 3.1 Description of sample

All in all, 1024 men and 328 women took part in the survey; information on the sex of the respondent is lacking in six cases. Of the respondents, 52.8% own the farm themselves, 12.2% name their partner as the owner, in 17.8% of the cases the farm belongs to both partners, and 8.5% lease the farm. In 73.6% of cases the survey respondent is the farm manager, in 16.5% their partner manages the farm, and 8.5% of respondents report that they are jointly registered with their partner as farm managers. 5.9% of the farm managers are female. 73.6% of the respondents and their farms are from German-speaking Switzerland, 21.5% from French-speaking and 2.5% from Italian-speaking Switzerland. 533 are from the plain region, 340 from the hill region, and 465 from the mountain region.

15.3% of the farms were farmed organically or according to Demeter guidelines. 73.5% ran the farm as their main occupation. The average total farm area was 23 ha. 57.5% of farms fell under the heading of animal production (dairy or beef production, suckler-cow production, rearing, poultry/eggs, horses, pigs, sheep/goats/other animals, alpine farming), 10.5% under plant production (field crops, special crops, viticulture), and 30% were engaged in both animal husbandry and plant production.

Four respondents were aged between 16 and 24, 249 between 25 and 39, 658 between 40 and 54, and 420 between 55 and 65 years of age. Twenty-one respondents were above 65. The average age was 49.1 years. The average respondent bore the main responsibility for three areas of work (e.g. farm work, household and childcare). 21.5% of respondents experienced a dual burden owing to work on the farm, and at least 41% also went out to work. On average, respondents had been farming for 20 years. No children lived in the respondent's household in 36.2% of cases, whilst an average of two children lived in the remaining 63.8% of the households. An average of three people in total lived in the household in addition to the survey respondent (partner, children, other relatives, employees, trainees and other persons).

All in all, the sample was broadly in line with the Swiss farming sector's distribution rates, with the result that we may speak of a representative sample. The hill region was slightly underrepresented. In terms of farm size, farms under 3 ha were slightly underrepresented, and those over 50 ha slightly overrepresented.

#### 3.2 The frequency of burnout disorders

Figure 1 shows the results of the analysis of the Copenhagen Burnout Inventory (CBI), according to which we have a group of participants at risk of burnout (n = 153; 11.6%) and a group not at risk of burnout (n = 1168; 88.4%). Here, the cut-off score with which Stöbel-Richter et al. (2013) had determined the reference scores of the general population in Germany was used. Anyone answering at least four of the six individual questions (see information box) with "often" or "always" was assigned to the 'at above-average risk of burnout' group. Individuals were assigned to the groups "at less-than-average risk of burnout" or "at average risk of burnout" according to the FFAW reference scores (see in-formation box).

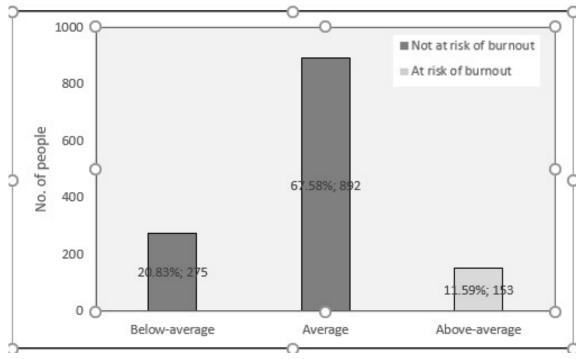


Fig.1: Number of people at risk of burnout. People in the 'above-average risk of burnout' group answered at least four out of six questions of the Copenhagen Burnout Inventory with "often" or "always". N = 1320.

#### 3.3 Burnout and farm characteristics

Against the background of just under 12% of the responding Swiss farmers suffering from burnout, the question still arises as to whether farm characteristics and sociodemographic factors play a role here. Knowledge on this subject would provide an initial starting point for counselling and prevention. Table 1 sheds light on these issues, showing the connection between farm characteristics and the extent of burnout, determined with the CBI.

In the three subgroups investigated – 'livestock', 'crops' and 'combined' – between 4.6 and 26.7% of participants are at risk of burnout. The majority of scores range between 10 and 12%, however. Thus, it can be said that the burnout cases are very similarly distributed across the three groups.

The statistical analysis shows that the extent of burnout is significantly higher for dairy farms than for other farm types (p < 0.05, n = 1340), and in addition differs significantly between the German- and French-speaking regions (p < 0.01, n = 1313) as well as between the farm managers on the one hand, and their spouses or partners on the other (p < 0.05, n = 1245).

Tab.1: Prevalence and context of burnouts and farm characteristics

		At Risk of		
Variables <sup>1</sup>	N	Burnout <sup>2</sup>	CBI Score <sup>3</sup>	Mean Rank <sup>4</sup>
Farm type, summarised	1304	Dumout		
Livestock	756	12.3%	38.9	676.60
	141	10.7%	37.6	650.09
Crops Combined	407	10.1%	37.0	648.11
Farm type <sup>5</sup>	1340	10.170	57.4	040.11
	615	12.2%	37.4	602 1/615 2
Dairy*				693.4/645.3
Suckler-cow production	252	13.5%	38.1	657.8/669.9
Beef production	332	11.7% 12.3%	39.2	688.9/660.9
Poultry/eggs	171		39.3	692.2/664.3
Horses	158	12.0%	39.1	683.6/665.9
Pigs	176	11.9%	38.9	685.8/665.3
Sheep/ goats / other animals	278	12.9%	39.0	687.3/662.8
Alpine farm	136	14.0%	39.1	686.5/665.3
Summering livestock on alpine pastures	360	12.2%	38.9	685.2/661.5
Livestock rearing	87	4.6%	37.3	549.7/670.9
Field crops	418	10.3%	36.7	676.8/666.5
Special crops	189	10.6%	38.2	770.4/671.3
Forestry	567	14.1%	38.7	675.0/661.4
Viticulture	42	11.9%	42.1	770.4/671.3
Other farm type	31	9.7%	33.1	655.6/727.0
Linguistic region*	1313			
German**	994	10.9%	37.5	655.57
French**	286	13.6%	40.1	729.25
Italian	33	15.2%	40.0	707.88
Location of farm	1301			
Plain region	518	11.6%	37.7	655.57
Hill region	333	14.1%	39.9	729.25
Mountain region	450	10.0%	37.7	707.88
Farm is part of a cooperative association	1306			
yes	91	8.8%	38.7	678.79
no	1215	11.8%	38.3	668.81
Farm management*	1298			
I am the farm manager	975	11.1%	37.6	650.69
My partner / husband / wife is the farm manager	215	15.3%	40.5	705.34
We are both officially registered as farm managers	108	9.3%	40.6	723.82
Ownership structure	1169			
Farm owned by respondent	770	12.1%	37.6	590.86
Farm owned by partner of respondent	167	13.2%	40.5	641.04
Farm belongs to both	232	7.8%	37.4	590.86
Organic farming system	1305			
Yes	201	11.9%	38.1	660.35
no	1104	11.7%	38.4	669.43
Utilised agricultural area (ha) according to category		11170	00.1	000.10
< 3	<b>1245</b> 38	18.4%	38.4	650.88
3 - < 10	201	7.0%	36.1	605.36
10 - < 20	385	9.4%	37.1	625.78
20 - < 30	299	9.4%	39.3	665.81
30 - < 50		12.3%	38.1	632.08
	219			
50 +	103	13.6%	40.5	699.37

<sup>1</sup>Asymptotic significance in terms of extent of burnout (CBI score) via Kruskal-Wallis test, \* p < 0.05, \*\* p < 0.01.

<sup>2</sup>According to the cut-off score defined by Stöbel-Richter (2013)
<sup>3</sup>Mean of the *Copenhagen Burnout Inventory* (CBI) score between 0 (never/almost never) and 100 (always).
<sup>4</sup> yes/no variable value left if farm type for example pigs "yes" and right if "no"
<sup>5</sup> More than one answer possible

#### 3.4 Burnout and sociodemographic variables

The influence of sociodemographic and household variables on the burnout index is shown in Table 2. Having primary responsibility for the farm work does not influence the extent of burnout. A dual workload, i.e. work on the farm and at least 40% outside work, surprisingly shows a significantly negative influence (p < 0.05, n = 1313), so that an in-verse causality must actually be assumed here (i.e. resilient individuals can cope with two jobs). By contrast, the number of task areas for which the respondent has primary responsibility has a significantly positive influence (rs = 0,089, p = 0,000, n = 1358), with, in particular, the categories of child-rearing and childcare (p < 0.01, n = 1358), garden and land-scaping work (p < 0.01, n = 1358) and caring for family members having little effect (p < 0.01, n = 1358) on the extent of burnout. Women are more frequently at risk of burnout than men (15.0% risk vs. 10.4% risk, respectively; p < 0.01, n = 1320. The extent of burnout is increased if the parental generation or employees live in the same household (p < 0.01, n = 1320 and p < 0.01, n = 1320. Educational level, farming origins and family status show no significant effect.

		At Risk of	CDI Second	
Variables <sup>1</sup>	n	Burnout <sup>2</sup>	CBI Score <sup>3</sup>	Mean Rank <sup>4</sup>
Farm work	1306			
Yes	1203	11.2%	38.05	666.33
No	16	26.7%	47.76	876.97
Occasional	90	14.6%	38.76	675.70
Dual workload <sup>5*</sup>	1292			0.01.0
Yes	283	9.5%	35.77	610.29
No	1009	12.2%	38.85	675.45
Primary responsibility in the following spheres <sup>6</sup>	1005	12.270	00.00	070.40
Administration	926	12.3%	38.61	678.64/654.45
Off-farm paid employment*	549	11.3%	37.14	648.90/691.02
Farm work	1122	11.0%	38.11	667.58/681.13
Child-rearing and childcare**	325	16.3%	42.18	757.59/642.85
Gardening and landscaping work**	440	14.5%	40.29	719.63/646.52
Household	436	16.1%	41.26	740.76/635.57
Para-agricultural activities	178	10.7%	38.89	694.54/667.84
Caring for family members**	74	21.6%	45.39	662.51/823.41
Grew up on a farm	1295			
Yes	1065	10.9%	37.78	657.28
No	230	13.9%	39.79	695.40
Age (in years) according to category	1348			
16–24	4			779.25
25–39	248			670.77
40–54	656			691.35
55–65	419			644.76
66+	21			765.83
Sex**	1315			
Female	320	15.0%	41.50	748.94
Male	995	10.4%	37.14	650.76
Civil status	1311	10.470	07.14	000.70
Single	172	13.4%	38.92	682.68
Married / Registered partnership	1021	10.2%	37.73	662.71
Divorced	1021	18.6%	41.14	746.88
Widowed	16	25.0%	40.36	715.63
Children	1303			
Yes	1079	11.6%	38.34	671.45
No	224	11.6%	37.61	651.49
Family phase	1320			
No children in household	478	11.7%	36.70	638.93
Children under 6 years of age in household	224	12.5%	39.27	695.55
Children between 6 and 16 years of age in household	305	10.8%	39.59	702.10
Children over 16 years of age in household	312	11.5%	38.80	691.27
People living in the household besides the children <sup>6</sup>	1320			
Wife/Husband/Partner	1075	11.3%	38.15	673.43/681.85
Mother/Mother-in-law/Father/Father-in-law**	185	15.1%	41.27	749.43/665.38
Other related persons	43	14.0%	36.85	656.08/677.72
Employees**	60	23.3%	44.66	803.39/670.93
Trainees*	76	15.8%	43.37	784.66/670.59
	39	23.1%	39.88	715.32/675.77
Other persons	100	20.170	00.00	110.02/010.11
Other persons Highest level of education				
Highest level of education	1274	12 5%	38.02	667 86
Highest level of education Secondary level I	<b>1274</b> 224	12.5%	38.92	667.86
Highest level of education Secondary level I Secondary level II	<b>1274</b> 224 679	11.3%	38.49	656.77
Highest level of education Secondary level I Secondary level II Tertiary level	<b>1274</b> 224 679 371			
Highest level of education Secondary level I Secondary level II Tertiary level How would you assess your financial situation?**	<b>1274</b> 224 679 371 <b>1152</b>	11.3% 11.6%	38.49 37.52	656.77 633.32
Highest level of education Secondary level I Secondary level II Tertiary level How would you assess your financial situation?** Very good	<b>1274</b> 224 679 371 <b>1152</b> 57	11.3% 11.6% 3.5%	38.49 37.52 27.05	656.77 633.32 414.39
Highest level of education Secondary level I Secondary level II Tertiary level How would you assess your financial situation?** Very good Good	<b>1274</b> 224 679 371 <b>1152</b> 57 475	11.3% 11.6% 3.5% 6.3%	38.49 37.52 27.05 33.52	656.77 633.32 414.39 567.61
Highest level of education Secondary level I Secondary level II Tertiary level How would you assess your financial situation?** Very good Good Just getting by	<b>1274</b> 224 679 371 <b>1152</b> 57 475 635	11.3% 11.6% 3.5% 6.3% 11.5%	38.49 37.52 27.05 33.52 39.77	656.77 633.32 414.39 567.61 707.38
Highest level of education Secondary level I Secondary level II Tertiary level How would you assess your financial situation?** Very good Good	<b>1274</b> 224 679 371 <b>1152</b> 57 475	11.3% 11.6% 3.5% 6.3%	38.49 37.52 27.05 33.52	656.77 633.32 414.39 567.61

Tab. 2: Prevalence of and connection between burnouts and sociodemographic/ household variables

<sup>1</sup>Asymptotic significance in terms of extent of burnout (CBI score) via Kruskal-Wallis test, \* p < 0.05, \*\* p < 0.01. <sup>2</sup>According to the cut-off score defined by Stöbel-Richter (2013) <sup>3</sup>Mean of the *Copenhagen Burnout Inventory* (CBI) score between 0 (never/almost never) and 100 (always).

<sup>4</sup> yes/no variable

<sup>5</sup>Work on the farm and at least 40% external work

<sup>6</sup> More than one answer possible

### 4 Discussion and Conclusion

The subject of burnout crops up repeatedly in the agricultural press in the form of case histories. This study has shown burnout to be a relevant topic in the Swiss farming sector. As measured by the Copenhagen Burnout Inventory (CBI), 12% of farmers who responded are affected – roughly twice as many as in the Swiss or German population as a whole (Stöbel-Richter et al. 2013; Igic 2015). Burnout is a state of severe exhaustion measured with the CBI. Moreover, it is important to bear in mind that although a standardised psychological measurement tool was used here, these results do not constitute a clinical diagnosis. Cross-sectional analyses, i.e. analyses at a particular point in time, are less meaningful than longitudinal studies. Those affected by burnout are probably less likely to take part in a survey, given their state of exhaustion. A replication study would make sense here. Nevertheless, we can at least gather from the results that some farmers struggle with exhaustion.

This disorder is caused by multiple factors, with both internal and external influencing factors being involved. Causality In terms of being precipitated by a single factor can seldom be determined, and differs significantly from one individual to another. Nevertheless, a tendency can be inferred, i.e. influencing factors emerge that are highly correlated with the extent of burnout. A person subjected to too many stressors may display symptoms of burnout. In this study, we were therefore interested in learning which farm and household characteristics and which sociodemographic variables influence the severity of burnout. There appears to be a slight connection with raised burnout scores where the farm is a dairy farm, which is congruent with the findings of Lourel und Mabire (2008) in France and Kallioniemi et al. (2016) in Finland. Possible reasons are to be found in an imbalance between expenditure of effort and yield, and the interplay of a variety of factors. Moreover, the influence of region is evident, with the CBI scores being lower in German-speaking Switzerland than in French-speaking Switzerland.

Several of the sociodemographic and household variables influence the extent of burn-out. Having primary responsibility in many spheres, especially for child-rearing and child-care as well as for the household and caring for family members, raises the risk of burnout. Being older tends to be a protective factor, which doubtless is also linked with phase of life and the decrease in other areas of responsibility. Women are more at risk, which is also borne out by the literature (Burisch 2005). A further important point, cited inter alia by Scherer (2015), is intergenerational conflict. Here, there is an evident link between the farm-management couple and the parental generation living together and increased burnout scores. The connection with the biggest impact was financial situation (i.e. its assessment by the respondent). The results suggest a major link between financial situation and the occurrence of burnout, though the trend of the connection cannot be explained. A number of studies have shown financial worries and existential anxiety to be linked to burnout (Demerouti et al. 2001; Zimmerman and Katon 2005), but the causal connection is not well understood.

It is evident that farm characteristics on their own have little impact on whether a farmer has burnout symptoms. Taken as a whole, the sociodemographic characteristics appear to be more influential. The results provide us with an indication of – or a trend for – factors potentially influencing the development of burnout; however, conclusions cannot be drawn as to actual causality. The influencing factors with significant correlations were also listed by the experts in preparation for this study. The interaction of these factors as well as additional influencing variables will be investigated in further analyses of the collected data.

This study is the first to provide data on the prevalence of burnout in the farming sector, and at the same time highlights the need for action. One of the peculiarities of burnout is that the person experiencing it is often not aware of the fact, i.e. he or she is dependent on someone on the outside pointing it out. In addition, it is extremely important to recognise burnout at an early stage, so that the course of events can be changed before it leads to a hopeless state of affairs that can often have catastrophic consequences for the affected person, his or her family, and the farm. For the sake of an agricultural sector that is sustainable on all levels, i.e. in terms of the social dimension as well, this study is also a plea for burnout prevention in farming, with agricultural counselling able to play an important role here.

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8

# 6 List of Figures and Tables

#### List of Figures

Figure 1: Number of people at risk of burnout.

#### List of Tables

Table 1: Prevalence and context of burnouts and farm characteristics	9
Table 2: Prevalence of and connection between burnouts and sociodemographic/ household variables	10