



# Presentation at BVA Congress

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# A cross-sectional study of mental health and well-being and their associations in the UK veterinary profession

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## Structure of presentation

- Background
- Methods
- Results
- Conclusions
- Acknowledgements
- Next steps

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## Elevated PMR for suicide – male vets

Author	Year	Region	Age	PMR	95% CI
Charlton and others (1993) <sup>1</sup>	1979-1990	Eng & Wales	16-64	364	NR
Kelly and Bunting (1998) <sup>2</sup>	1982-1987	Eng & Wales	20-64	349	203-559
Kelly and Bunting (1998) <sup>2</sup>	1991-1996	Eng & Wales	20-64	324	148-615
Mellanby (2005) <sup>3</sup>	1979-1990	Eng & Wales	20-74	361	252-503
Mellanby (2005) <sup>3</sup>	1991-2000	Eng & Wales	20-74	374	244-548
Stark and others (2006) <sup>4</sup>	1981-1999	Scotland	16-45	293	80-749
Stark and others (2006) <sup>4</sup>	1981-1999	Scotland	46-64	301	36-1088

Source: BARTRAM, D.J. & BALDWIN, D.S. (in press) *Veterinary Record*

NR, not reported

1. CHARLTON, J. *et al* (1993) *Population Trends* **71**, 34-42
2. KELLY, S. & BUNTING, J. (1998) *Population Trends* **92**, 29-41
3. MELLANBY, R. (2005) *Veterinary Record* **157**, 415-417
4. STARK, C. *et al* (2006) *Health Statistics Quarterly* **29**, 26-29

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## Elevated PMR for suicide – female vets

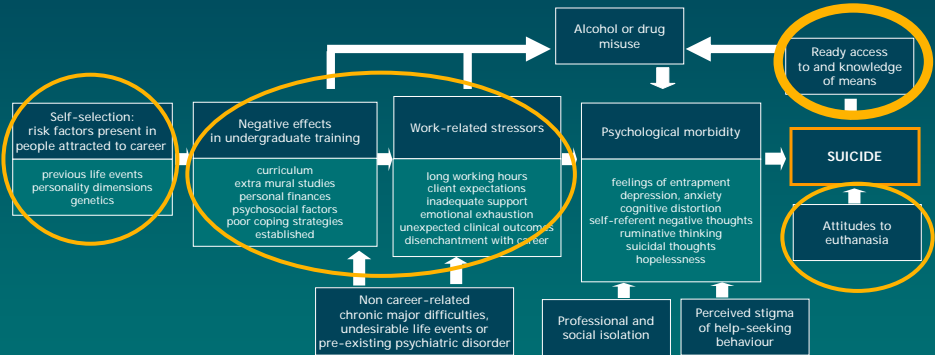
Author	Year	Region	Age	PMR	95% CI
Kelly and Bunting (1998) <sup>1</sup>	1991-1996	Eng & Wales	20-59	500	136-1279
Mellanby (2005) <sup>2</sup>	1979-1990	Eng & Wales	20-74	414	166-853
Mellanby (2005) <sup>2</sup>	1991-2000	Eng & Wales	20-74	1240	446-2710
Meltzer and others (2008) <sup>3</sup>	2001-2005	Eng & Wales	20-64	609	198-1422

Source: BARTRAM, D.J. & BALDWIN, D.S. (in press) *Veterinary Record*

1. KELLY, S. & BUNTING, J. (1998) *Population Trends* **92**, 29-41
2. MELLANBY, R. (2005) *Veterinary Record* **157**, 415-417
3. MELTZER, H. *et al* (2008) *British Journal of Psychiatry* **193**, 73-76

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## Hypothetical model to explain increased risk of suicide among veterinary surgeons



BARTRAM, D.J. & BALDWIN, D.S. (2008) *Veterinary Record* **162**, 36-40

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## Methods (1)

- 120-item questionnaire
- Mailed twice to 3,200 UK veterinary surgeons (Oct and Nov 2007)
- Random stratified sample (Vetfile® database)
- Questionnaire content
  - Demographic and occupational details
  - Anxiety and depressive symptoms (HADS)<sup>1</sup>
  - Alcohol consumption (AUDIT-C)<sup>2</sup>
  - Suicidal ideation<sup>3</sup>
  - Positive mental well-being (WEMWBS)<sup>4</sup>
  - Perceptions of psychosocial work characteristics (HSE MS Indicator Tool)<sup>5</sup>
  - Work-home interaction (SWING)<sup>6</sup>
  - Veterinary work-related stressors

1. Hospital Anxiety and Depression Scale. ZIGMOND, A.S. & SNAITH, R.P. (1983) *Acta Psychiatrica Scandinavica* **67**, 361-370

2. Alcohol Use Disorders Identification Test, consumption questions. BUSH, K. *et al* (1998) *Archives of Internal Medicine* **158**, 1789-1795

3. PAYKEL, E.S. *et al* (1974) *British Journal of Psychiatry* **124**, 460-469

4. Warwick-Edinburgh Mental Well-Being Scale. TENNANT, R. *et al* (2007) *Health & Quality of Life Outcomes* **5**, 63

5. HSE Management Standards Indicator Tool. COUSINS, R. *et al* (2004) *Work & Stress* **18**, 113-136

6. SWING scale, work-home interaction subscales. GEURTS, S.A.E. *et al* (2005) *Work & Stress* **19**, 319-339

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## Methods (2)

- NHS Research Ethics Committee<sup>1</sup> review
- Anonymous responses
  - Option to supply name and contact details if willing to participate in possible subsequent phase involving confidential interviews
- Data entry by automated scanning
- Statistical analysis in SPSS v.16
  - Minor imputation of missing data

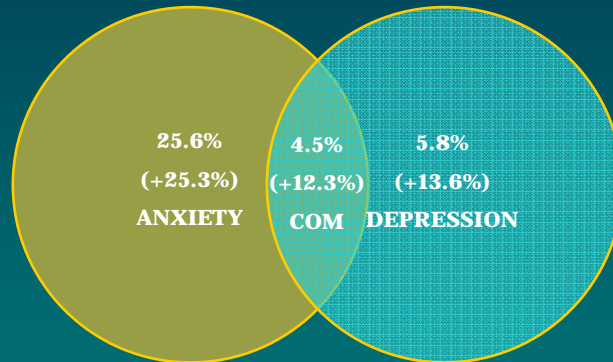
1. Southampton and South West Hampshire Research Ethics Committee (B): REC reference number: 07/H0504/122

## Results: Response rate

- 56.1% response rate
  - 1,796 usable returns
    - 50.0% male ( $n=896$ ); 50.0% female ( $n=895$ )
    - Mean age: male, 44.9 yrs (SD=11.0)  
female, 36.8 yrs (SD=9.1)
- Demographic and occupational profile of respondents aligned with RCVS home-practising membership

## Results: Anxiety and depressive symptoms (1)

Prevalence of anxiety, co-morbid anxiety and depression, and depression caseness



COM: Co-morbid anxiety and depression

Prevalence of HADS-A or HADS-D score  $\geq 11$  (probable case)

Figures in parentheses HADS-A or HADS-D score 8-10 (possible case)

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## Results: Anxiety and depressive symptoms (2)

	HADS-A			HADS-D		
	Anxiety sub-scale			Depression sub-scale		
	Non-case	Possible case	Probable case	Non-case	Possible case	Probable case
	0-7 %	8-10 %	11+ %	0-7 %	8-10 %	11+ %
Veterinary surgeons <i>n</i> =1757	48.4	25.3	26.3	80.6	13.6	5.8
General population <sup>1</sup> <i>n</i> =1792	61.4	26.0	12.6	88.6	7.8	3.6
		<i>p</i> <0.001			<i>p</i> <0.001	

1. CRAWFORD, J.R. *et al* (2001) *British Journal of Clinical Psychology* 40, 429-434

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## Results: Alcohol consumption (1)

	Non-drinkers	Low-risk drinkers	At-risk drinkers
	Score 0 % (95% CI)	Score 1-4 (men) Score 1-3 (women) % (95% CI)	Score 5+ (men) Score 4+ (women) % (95% CI)
Veterinary surgeons <i>n</i> =1757	5.4 (0.4-6.6)	32.0 (29.9-34.3)	62.6 (60.3-64.8)
General population <sup>1</sup> <i>n</i> =8575	12.3	39.9	47.7

*p*<0.001

1. Figures are derived from the *Psychiatric Morbidity among Adults living in Private Households, 2000* Survey (SINGLETON, N. *et al* 2001)

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## Results: Alcohol consumption (2)

- Compared to the general population,<sup>1</sup> the sample
  - Less likely to be non-drinkers
  - Drink more frequently
  - Consume less on a typical drinking day
  - Have similar prevalence of daily and weekly binge-drinking

1. COULTHARD, M. *et al* (2002) *Tobacco, alcohol and drug use and mental health*. London, The Stationery Office

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## Results: Suicidal thoughts

	12-month prevalence of suicidal thoughts				<i>p</i> -value
	General population <sup>1</sup>		Veterinary surgeons		
	<i>n</i>	%	<i>n</i>	% (95% CI)	
Total	8572	3.9	1749	21.3 (19.5-23.3)	<0.001
Gender					
Male	3848	3.6	878	20.2	
Female	4724	4.1	871	22.5	<0.001

A positive response to the question: 'Have you considered taking your own life even if you would not really do it?'

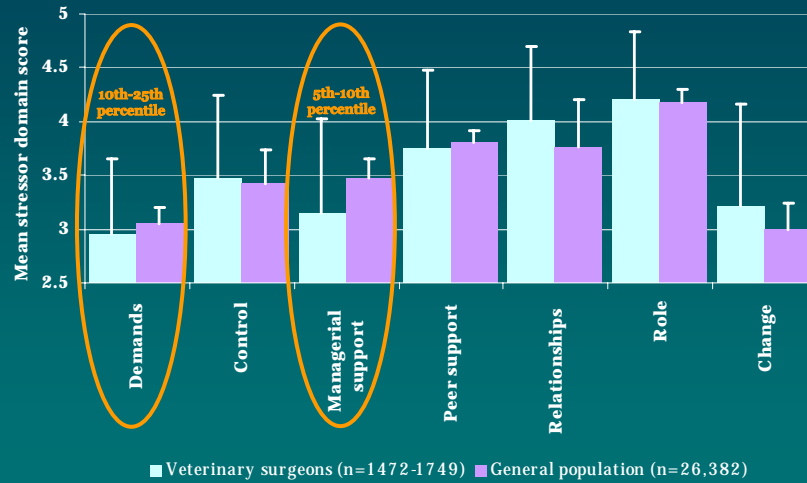
1. MELTZER, H. *et al* (2002) Non-fatal suicidal behaviour among adults aged 16 to 74 in Great Britain. London, The Stationery Office

## Results: Mental well-being

	Warwick-Edinburgh Mental Well-being Scale scores				<i>p</i> -value
	General population <sup>1</sup>		Veterinary surgeons		
	<i>n</i>	Mean (SD)	<i>n</i>	Mean (SD)	
Total	973	51.05 (8.54)	1757	48.85 (9.06)	<0.001
Gender					
Male	529	51.21 (8.40)	881	49.86 (8.99)	0.005
Female	687	50.92 (8.66)	876	47.83 (9.02)	<0.001

1. BRAUNHOLTZ, S. *et al* (2007) The Third National Scottish Survey of Public Attitudes to Mental Health, Mental Well-being and Mental Health Problems. Edinburgh, The Scottish Executive

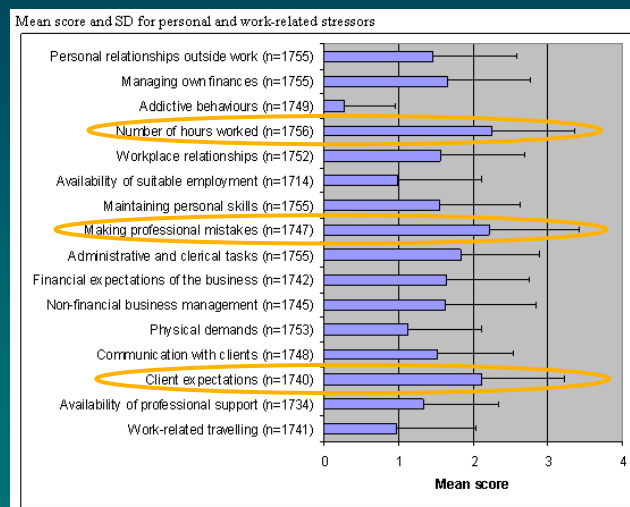
## Results: Psychosocial work characteristics



1. EDWARDS, J.A. *et al* (2008) *Work & Stress* 22, 96-107

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## Results: Personal and work-related stressors



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## Conclusions

- Compared to the general population, the sample reported:
  - Higher levels of anxiety and depressive symptoms
  - Higher proportion of at-risk drinkers
  - Higher 12-month prevalence of suicidal thoughts
  - Lower levels of positive mental well-being
  - Less favourable psychosocial working conditions
    - demands and managerial support
- Levels of psychological distress reported suggest ready access to and knowledge of lethal means is probably not operating in isolation to increase suicide risk

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## Selected study-related publications

- **BARTRAM, D.J.** & BALDWIN, D.S. (2008) Veterinary surgeons and suicide: influences, opportunities and research directions. *Veterinary Record* **162**, 36-40
- **BARTRAM, D.J.**, SINCLAIR, J.M.A. & BALDWIN, D.S. (2009) Alcohol consumption among veterinary surgeons in the UK. *Occupational Medicine* **59**, 323-326
- **BARTRAM, D.J.**, YADEGARFAR, G. & BALDWIN, D.S. (2009) A cross-sectional study of mental health and well-being and their associations in the UK veterinary profession. *Social Psychiatry and Psychiatric Epidemiology*, Epub ahead of print 18 Mar 2009, doi: 10.1007/s00127-009-0030-8
- **BARTRAM, D.J.**, YADEGARFAR, G. & BALDWIN, D.S. (2009) Psychosocial working conditions and work-related stressors among UK veterinary surgeons. *Occupational Medicine* **59**, 334-341
- **BARTRAM, D.J.**, YADEGARFAR, G. & BALDWIN, D.S. (2008) Reported alcohol consumption, depressive and anxiety symptoms, and mental well-being among UK veterinary surgeons: cross-sectional questionnaire survey. *Journal of Psychopharmacology* **22** (5 Abstract Suppl.), A30
- **BARTRAM, D.J.**, YADEGARFAR, G. SINCLAIR, J.M.A. & BALDWIN, D.S. (2009) Associations between alcohol consumption and psychosocial working conditions among UK veterinary surgeons: cross-sectional questionnaire survey. *Journal of Psychopharmacology* **23** (6 Abstract Suppl.), A36

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- Participating veterinary surgeons
- Academic supervisors: University of Southampton
  - Dr David S Baldwin MB BS DM FRCPsych  
Reader in Psychiatry and Honorary Consultant Psychiatrist
  - Dr Julia Sinclair BSc MB BS MSc DPhil MRCPsych  
Senior Lecturer in Psychiatry and Honorary Consultant Psychiatrist
- Veterinary Business Development Ltd
  - Publisher of *Veterinary Times*
  - Vetfile® database, printing and mailing of questionnaires
- BUPA Giving
  - Financial support

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## Next steps: other studies underway

- Telephone interview study
  - Purposive sample of respondents to questionnaire survey
    - ❖ 110 respondents (52 men, 58 women)
    - ❖ positive response to all three questions on suicidal thoughts
    - ❖ supplied name and telephone no. to indicate willing in principle to be interviewed
  - To explore
    - ❖ causal attribution of suicidal thoughts
    - ❖ help-seeking behaviour and barriers
  - Qualitative and quantitative analysis
  - Financial support
    - ❖ BUPA Giving, BSAVA, SPVS, Lakeland Veterinary Association
- Examination of coroners' records for vet suicides in Wessex region

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