

**Table S1.** Summary of responses for experiences with chimpanzee management events

<b>Event</b>	<b>Institution</b>	<b>Never n (%)</b>	<b>Once n (%)</b>	<b>Multiple n (%)</b>	<b>n</b>
<b>Transfer in</b>	Sanctuary	13 (34.14)	3 (8.57)	19 (54.29)	35
	Zoo	38 (43.18)	25 (28.41)	25 (28.41)	88
<b>Transfer out</b>	Sanctuary	32 (91.43)	0 (0)	3 (8.57)	35
	Zoo	51 (57.95)	14 (15.91)	23 (26.14)	88
<b>Live birth</b>	Sanctuary	32 (91.43)	2 (5.71)	1 (2.86)	35
	Zoo	57 (64.77)	15 (17.05)	16 (18.18)	88
<b>Still birth</b>	Sanctuary	34 (97.14)	0 (0)	1 (2.86)	35
	Zoo	70 (79.55)	15 (17.05)	3 (3.41)	88
<b>Death (natural causes)</b>	Sanctuary	3 (8.57)	8 (22.86)	24 (68.57)	35
	Zoo	45 (51.72)	22 (25.29)	20 (22.99)	87
<b>Death (euthanasia)</b>	Sanctuary	8 (22.86)	2 (5.71)	25 (71.43)	35
	Zoo	49 (56.32)	16 (18.39)	22 (25.29)	87
<b>Social introductions</b>	Sanctuary	6 (17.14)	0 (0)	29 (82.86)	35
	Zoo	30 (34.09)	11 (12.5)	47 (53.41)	88

## Chimpanzee keeper compassion fatigue survey

1. You are invited to participate in a research study about compassion fatigue. This study is being conducted by Steve Ross, PhD and Jesse Leinwand, M.A. of Lincoln Park Zoo with the goal of assessing the occupational health of chimpanzee caregivers by evaluating their experiences with compassion fatigue. Participation in this study is voluntary and you are free to leave any questions blank or quit the survey at any time, however, you must be 18 years or older to participate. The survey should take you approximately 15 minutes to complete.

This survey has been reviewed by Lincoln Park Zoo's Research Committee and Institutional Review Board. All responses are confidential: you do not need to provide us with your name, email address, or the institution you work for. Please respond to the questions as honestly as you can: all data that are reported will be pooled together to ensure anonymity and your institution will never see your individual responses.

Please reach out to \*\*\*\*\*@lpzoo.org if you have any questions or concerns. Alternatively, if you would like to talk with someone other than the researchers to discuss problems or concerns or to discuss your rights as a research participant, you may contact the Lincoln Park Zoo Institutional Review Board at \*\*\*\*\*@lpzoo.org.

☐ By clicking here, you consent to participate in this study.

### Part A – Demographics

2. What gender do you identify with (please select one)

- Female
- Male
- Non-binary
- Prefer to self-describe \_\_\_\_\_

3. Which of the following best describes your age? (please select one)

- 18-25 years old
- 26-35 years old
- 36-45 years old
- 46-55 years old
- 56-65 years old
- 65+ years old

4. Which of the following best describes how long you have been working in with chimpanzees? (please select one)

- 0-5 years
- 6-10 years
- 11-15 years

- 16-20 years
- Longer than 20 years

5. What type of organization do you work for? (please select one)

- Zoo
- Sanctuary

6. How long have you been in your current position? (please select one)

- 0-5 years
- 6-10 years
- 11-15 years
- 16-20 years
- Longer than 20 years

7. How often do you feel that you are understaffed at work?

- Always
- Often
- Sometimes
- Rarely
- Never

**Questions 8-17 provide ten personality traits that may or may not apply to you from the Ten-Item Personality Index (Gosling et al., 2003). Please select an option for each statement that indicates the extent to which you agree or disagree with that statement. You should rate the extent to which the pair of traits applies to you, even if one characteristic applies more strongly than the other.**

8. Extroverted, enthusiastic

- Disagree strongly
- Disagree moderately
- Disagree a little
- Neither agree nor disagree
- Agree a little
- Agree moderately
- Agree strongly

9. Critical, quarrelsome

- Disagree strongly
- Disagree moderately
- Disagree a little
- Neither agree nor disagree
- Agree a little
- Agree moderately
- Agree strongly

10. Dependable, self-disciplined

- Disagree strongly
- Disagree moderately
- Disagree a little
- Neither agree nor disagree
- Agree a little
- Agree moderately
- Agree strongly

11. Anxious, easily upset

- Disagree strongly
- Disagree moderately
- Disagree a little
- Neither agree nor disagree
- Agree a little
- Agree moderately
- Agree strongly

12. Open to new experiences, complex

- Disagree strongly
- Disagree moderately
- Disagree a little
- Neither agree nor disagree
- Agree a little
- Agree moderately
- Agree strongly

13. Reserved, quiet

- Disagree strongly
- Disagree moderately
- Disagree a little
- Neither agree nor disagree
- Agree a little
- Agree moderately
- Agree strongly

14. Sympathetic, warm

- Disagree strongly
- Disagree moderately
- Disagree a little
- Neither agree nor disagree
- Agree a little

- Agree moderately
- Agree strongly

15. Disorganized, careless

- Disagree strongly
- Disagree moderately
- Disagree a little
- Neither agree nor disagree
- Agree a little
- Agree moderately
- Agree strongly

16. Calm, emotionally stable

- Disagree strongly
- Disagree moderately
- Disagree a little
- Neither agree nor disagree
- Agree a little
- Agree moderately
- Agree strongly

17. Conventional, uncreative

- Disagree strongly
- Disagree moderately
- Disagree a little
- Neither agree nor disagree
- Agree a little
- Agree moderately
- Agree strongly

## **Part B – Compassion Fatigue**

18. Compassion fatigue is a profound emotional and physical exhaustion that animal caregivers can develop when they are unable to refuel and regenerate because of the nature of their work. Compassion fatigue is a normal occurrence and is commonly seen across many professions, including individuals working with and caring for animals.

Have you ever experienced compassion fatigue?

- Yes
- No
- Unsure

19. (Skip if you replied "No" or "Unsure" to question 18) Has the Covid-19 pandemic contributed to your experiences of compassion fatigue?

- Yes
- No
- Unsure

20. Which feelings do you associate with compassion fatigue? (please select all that apply)

- Sadness
- Depression
- Anxiety
- Apathy (loss of interest/enthusiasm)
- Hopelessness
- Resentment
- Guilt
- Frustration
- Anger
- Exhaustion
- Isolation
- Other (please specify) \_\_\_\_\_

21. How often do you feel that compassion fatigue negatively affects your ability to do your job?

- Always
- Often
- Sometimes
- Rarely
- Never

22. How often do you feel that compassion fatigue has led you to feel apathetic towards your job (i.e., loss of interest, lack of enthusiasm)?

- Always
- Often
- Sometimes
- Rarely
- Never

23. How often do you feel stressed at work?

- Always
- Often
- Sometimes
- Rarely
- Never

24. How often do you feel comfortable discussing your feelings in your place of work?

- Always
- Often
- Sometimes
- Rarely
- Never

25. How often do you feel comfortable discussing concerns you have regarding your work or animals in your care with your supervisors?

- Always
- Often
- Sometimes
- Rarely
- Never

26. How often do you feel that there is good communication between you and your supervisors?

- Always
- Often
- Sometimes
- Rarely
- Never

27. How often do you feel that your place of employment encourages employees to balance their professional lives with their personal lives?

- Always
- Often
- Sometimes
- Rarely
- Never

28. How often do you blame yourself for the suffering of an animal or group of animals in your care?

- Always
- Often
- Sometimes
- Rarely
- Never

29. How often do you feel that you alone are responsible for the well being of an animal or groups of animals in your care?

- Always
- Often
- Sometimes
- Rarely
- Never

**Questions 30-42 provide a variety of work-related factors that may influence feelings of compassion fatigue.**

**To what extent does each work-related factor influence your feelings of compassion fatigue?**

30. Working overtime

- Extremely
- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

31. Working weekends and holidays

- Extremely
- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

32. Company Image

- Extremely
- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

33. Good relationships with coworkers

- Extremely
- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

34. Poor relationships with coworkers

- Extremely
- Moderately
- Somewhat
- Slightly



- Not at all
- Not applicable

35. Good relationships with supervisors

- Extremely
- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

36. Poor relationships with supervisors

- Extremely
- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

37. Good relationships with animals

- Extremely
- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

38. Poor relationships with animals

- Extremely
- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

39. Being understaffed

- Extremely
- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

40. Lack of training

- Extremely
- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

41. Lack of resources

- Extremely
- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

42. Other (please specify)

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**Questions 43-55 provide a variety of personal factors that may influence feelings of compassion fatigue.**

**To what extent does each personal related factor influence your feelings of compassion fatigue?**

43. Good mental health

- Extremely
- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

44. Poor mental health

- Extremely
- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

45. Good physical health

- Extremely

- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

46. Poor physical health

- Extremely
- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

47. Financial security

- Extremely
- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

48. Financial problems

- Extremely
- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

49. Good relationships with family

- Extremely
- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

50. Poor relationships with family

- Extremely
- Moderately
- Somewhat
- Slightly

- Not at all
- Not applicable

51. Good relationships with friends

- Extremely
- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

52. Poor relationships with friends

- Extremely
- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

53. Owned pets have good mental/physical health

- Extremely
- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

54. Owned pets have poor mental/physical health

- Extremely
- Moderately
- Somewhat
- Slightly
- Not at all
- Not applicable

55. Other (please specify)

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## Part C - Nature of Work

Responses to this section should relate exclusively to chimpanzee-related work (e.g., if applicable, do not consider current or previous experiences working as a caregiver for other species).

56. Do you feel that you have received adequate training and resources to do your job properly?

- Yes
- No
- Unsure

57. Which other species do you routinely work with? (please select all that apply)

- None (I only work with chimpanzees)
- Other great apes (gorillas, bonobos, orangutans)
- Non-great ape primates (gibbons, siamangs, monkeys, prosimians)
- Non-primate mammals
- Non-mammals

58. Which of the following procedures do you perform regularly? (please select all that apply)

- Training
- Feeding
- Shifting
- Cleaning
- Preparing and providing enrichment
- Research
- Routine veterinary procedures (ex. Blood draws, tissue collection, urine sampling, sedations, etc.)
- Other (please specify) \_\_\_\_\_

**Questions 59-65 ask about the frequency with which you've experienced a variety of chimpanzee-specific work-related events.**

**Have you experienced any of the following (never, once, multiple)?**

59. Transfer in

- Never
- Once
- Multiple

60. Transfer out

- Never
- Once
- Multiple

61. Live birth

- Never
- Once
- Multiple

62. Still birth

- Never
- Once
- Multiple

63. Death (natural causes)

- Never
- Once
- Multiple

64. Death (euthanasia)

- Never
- Once
- Multiple

65. Social introductions

- Never
- Once
- Multiple

## **Part D - Solutions and Coping Mechanisms**

66. Does your place of employment have a compassion fatigue support program of any kind in place?

- Yes
- No
- Unsure

67. (Skip this question if you replied "No" or "Unsure" to question 66) How often do you feel that this program is helpful to you?

- Always
- Often
- Sometimes
- Rarely
- Never

68. Have you ever had any form of self-care or resiliency training through your place of employment?

- Yes
- No
- Unsure

69. Which of the following coping mechanisms do you currently use for dealing with feelings of compassion fatigue? (please select all that apply)

- Talk to someone (ex. family, friends, coworkers)
- Self-care strategies (ex. eating healthy, getting enough sleep)
- Seeking professional help (ex. therapist)
- Getting away from work (ex. no email after work hours, leave on time, take a day off)
- Physical activity (ex. working out, going for a walk, yoga)
- Mindfulness practices (ex. meditation, breathing)
- Owning and caring for pets
- Religion (ex. prayer)
- Recreational use of alcohol/drugs/smoking cigarettes
- Emotional eating (ex. over eat, under eat, eat sweets, etc.)
- Release emotions after work (ex. crying, yelling)
- Emotionally detach from job (ex. do not allow yourself to become too attached to an animal in your care)
- Seek further education (ex. on experiments, benefits of research, coping mechanisms)
- I currently do not use any coping mechanisms
- Other (please specify) \_\_\_\_\_

70. How often are your current coping mechanisms effective at alleviating your feelings of compassion fatigue?

- Always
- Often
- Sometimes
- Rarely
- Never

**For questions 71-74, which of the listed programs would be beneficial to have in your place of work to help with compassion fatigue? For each section, please rank the options from most beneficial to least beneficial with #1 being the most beneficial.**

**To rank each option, click and drag the phrases into the order you want them (with #1 being the top spot). If you do not think that any of the listed programs would be beneficial, please indicate this by using the “None of these” option and ranking it as #1.**

71. Physical

- 1) Place and time to exercise at work (ex. on site gym)
- 2) Activity groups at work (ex. yoga classes, lunch time walking group, gardening club, etc.)
- 3) Monetary reimbursement for activities outside of work (ex. employer covers cost of gym membership)
- 4) None of these

72. Mental/Emotional

- 1) Quiet place (ex. place to be alone and reflect)
- 2) Mindfulness classes (ex. meditation, breathing and calming techniques)

- 3) Therapist (ex. individual sessions to discuss feelings)
- 4) Classes/training on coping mechanisms
- 5) Self-care training (ex. building resilience, balancing work/personal life, healthy living, relaxation techniques)
- 6) Self-monitoring of compassion fatigue (ex. ProQOL survey)
- 7) None of these

73. Social

- 1) Support group (ex. talk about feelings/work with peers and coworkers)
- 2) Memorial for animals (ex. gardens, plaques)
- 3) Recreational activities outside work (ex. paint nights, dinners out)
- 4) Building and strengthening relationships with co-workers (ex. team building exercises or retreats, opportunities to interact with supervisors/management/employees from other departments)
- 5) Lunch time activities (ex. potluck lunch, celebrating co-worker birthdays, lunch and learn presentations)
- 6) None of these

74. Work Management

- 1) Enforcing strict workday hours (ex. no overtime, always take breaks and lunches)
- 2) Paid leave from work (ex. mental health days, emotional support days)
- 3) Childcare programs at work
- 4) Communication workshops (ex. to strengthen communication between peers and with supervisors)
- 5) Reward programs (ex. to recognize hard work, boost moral)
- 6) Ability to change workspace environment (ex. common areas to work)
- 7) Debriefing on experiments/veterinary procedures (ex. reasons for experiment/veterinary procedure, potential benefits/significance of research, expected outcomes)
- 8) None of these

75. Please specify any other compassion fatigue support program idea in the space provided:

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76. Thank you very much for your participation!

Please leave any additional comments you have on compassion fatigue or coping mechanisms in the space provided. Comments and feedback on the survey are also welcome.

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