

## References

Single-space each reference entry and double-space between each reference.

- Ambrose, S., Dunkle, K., Lazarus, B., Nair, I., & Harkus, D. (1997). *Journeys of women in science and engineering: No universal constants*. Philadelphia, PA: Temple University Press.
- Barber, L. (1995). U.S. women in science and engineering, 1960-1990: Progress toward equity? *The Journal of Higher Education*, 66(2), 213-234.
- Barclay, S., Stoltz, K., & Chung, Y. (2011). Voluntary midlife career change: Integrating the transtheoretical model and the life-span, life-space approach. *The Career Development Quarterly*, 59, 386-399. doi:10.1002/j.2161-0045.2011.tb00966.x
- Baumgartner, M., & Schneider, D. (2010). Perceptions of women in management: A thematic analysis of razing the glass ceiling. *Journal of Career Development*, 37, 559-576. doi: 10.1177/0894845309352242
- Beasley, M., & Fisher, M. (2012). Why they leave: The impact of stereotype threat on the attrition of women and minorities from science, math and engineering majors. *Social Psychology of Education*, 15, 427-448. doi:10.1007/s11218-012-9185-3
- Beddoes, K., & Borrego, M. (2011). Feminist theory in three engineering education journals: 1995-2008. *Journal of Engineering Education*, 100(2), 281-303. doi:10.1002/j.2168-9830.2011.tb00014.x
- Beninger, A. & Carter, N. (2013). The great debate: Flexibility vs. face time. *Catalyst*. Retrieved from [http://www.catalyst.org/system/files/the\\_great\\_debate\\_flexibility\\_vs\\_face\\_time.pdf](http://www.catalyst.org/system/files/the_great_debate_flexibility_vs_face_time.pdf)
- Birks, M., & Mills, J. (2011). *Grounded theory: A practical guide*. London, UK: Sage Publications Ltd.
- Brawner, C., Camacho, M., Lord, S., Long, R., & Ohland, M. (2012). Women in industrial engineering: Stereotypes, persistence, and perspectives. *Journal of Engineering Education*, 101(2), 288-318. doi:10.1002/j.2168-9830.2012.tb00051.x
- Bryant, A., & Charmaz, K. (2010). *The Sage handbook of grounded theory*. London, England: Sage Publications Ltd.
- Buse, K., & Bilimonia, D. (2013). Why they stay: Women persisting in U.S. engineering careers. *Career Development International*, 18(2), 139-154. doi:10.1108/CDI-11-2012-0108
- Bystydzienski, J. (2009). Why so few women? Explaining gendered occupational outcomes in science, technology, engineering and math fields. *Sex Roles*, 60, 751-753. doi:10.1007/s11199-008-9548-6

Do not capitalize "doi"

Use **italics** for the journal title and volume number.

- Bystydzienski, J., & Bird, S. (2006). *Removing barriers: Women in academic science, technology, engineering, and mathematics*. Bloomington, IN: Indiana Press.
- Cech, E., Rubineau, B., Silbey, S., & Seron, C. (2011). Professional role confidence and gendered persistence in engineering. *American Sociological Review*, 76, 641-666. doi:10.1177/0003122411420815
- Charmaz, K. (2006). *Constructing grounded theory: A practical guide through qualitative analysis*. London, UK: Sage Publications Ltd.
- Cheryan, S. (2012). Understanding the paradox in math-related fields: Why do some gender gaps remain while others do not? *Sex Roles*, 66(3-4), 184-190. doi:10.1007/s11199011-0060-z
- Cohen, A. (1996). A brief history of federal financing for child care in the United States. *The Future of Children*, 6(2), 26-40. doi:10.2307/1602417
- Congressional Record: Daily Digest of the 110th Congress First Session. (2007). Retrieved from <http://books.google.com/books?id=nt1ARbBaSGgC&printsec=frontcover#v=onepage&q&f=false>
- Cordero, E., Porter, S., Israel, T., & Brown, M. (2010). Math and science pursuits: A self-efficacy intervention comparison study. *Journal of Career Assessment*, 18, 362-375. doi:10.1177/1069072710374572
- Creswell, J. W. (2003). *Research design: Qualitative, quantitative and mixed methods approaches* (2nd ed.). Thousand Oaks, CA: Sage Publications, Inc.
- Dávila, N., & Piña-Ramírez, W. (2014). What drives employee engagement? It's all about the "T". *Public Manager*, 43(1), 6-9.
- Deemer, E. D., Thoman, D. B., Chase, J. P., & Smith, J. L. (2014). Feeling the threat: Stereotype threat as a contextual barrier to women's science career choice intentions. *Journal of Career Development*, 41(2), 141-158. doi:10.1177/0894845313483003
- Drury, B., Siy, J., & Cheryan, S. (2011). When do female role models benefit women? The importance of differentiating recruitment from retention in STEM. *Psychological Inquiry*, 22(4), 265-269. doi:10.1080/1047840X.2011.620935
- Esponisa, L. (2011). Pipelines and pathways: Women of color in undergraduate STEM majors and the college experiences that contribute to persistence. *Harvard Educational Review*, 81(2), 209-240.
- Etzkowitz, H. (2008). Removing barriers: Women in academic science, technology, engineering, and mathematics. *Contemporary Sociology*, 37(1), 24-25. doi:10.1177/009430610803700108

Each reference entry should use a **hanging indent**.

Etzioni, A. (1964). *Modern organizations*. Englewood Cliffs, NJ: Prentice Hall.

Fouad, N., Fitzpatrick, M., & Liu, J. (2011). Persistence of women in engineering careers: A qualitative study of current and former female engineers. *Journal of Women and Minorities in Science and Engineering*, 17(1), 69-96.  
doi:10.1615/JWomenMinorScienEng.v17.i1.60

Fouad, N., Singh, R., Fitzpatrick, M., & Liu, J. (2013). *Stemming the tide: Why women leave engineering*. *Journal of Vocational Behavior*, 83, 281-294.

Frankfort-Nachmias, C., & Nachmias, D. (2008). *Research methods in the social sciences* (7th ed.). New York, NY: Worth Publishers.

Freidman, M., & Lackey, G. (1991). *The psychology of human control: A general theory of purposeful behavior*. New York, NY: Praeger Publishers.

Friedman, S. D., & Greenhaus, J. H. (2000). *Work and family - allies or enemies?: What happens when business professionals confront life choices*. New York, NY: Oxford University Press.

Furnham, A., Eracleous, A., & Chamorro-Premuzic, T. (2009). Personality, motivation, and job satisfaction: Herzberg meets the big five. *Journal of Managerial Psychology*, 24, 765-779. doi:10.1108/02683940910996789

Gilbert, A. (2009). Disciplinary cultures in mechanical engineering and material science. *Equal Opportunities International*, 28(1), 24-35. doi:10.1108/0261015910933613

Giles, M., Ski, C., & Vrdoljak, D. (2009). Career pathways of science, engineering and technology research postgraduates. *Australian Journal of Education*, 53(1), 69-86.  
doi:10.1177/000494410905300106

Gill, S. (2012). Book review. [Review of Workplace flexibility: Realigning 20th-century jobs for the 21st-century workforce.] *Gender & Society*, 26, 521-522.  
doi:10.1177/0891243211408719

Glaser, B., & Strauss, A. (1967). *The discovery of grounded theory: Strategies for qualitative research*. New Brunswick, NJ: Aldine Transaction.

Glass, C., & Minnotte, K. (2010). Recruiting and hiring women in STEM fields. *Journal of Diversity in Higher Education*, 3(4), 218-229. doi:10.1037/0020581

Grosvold, J. (2011). Where are all the women? Institutional context and the prevalence of women on the corporate board of directors. *Business & Society*, 50, 531-555.  
doi:10.1177/0007650311408791

**Tip:** In title of articles, only the first word of the title, the first word after a colon, and proper nouns are capitalized.

Heilbronner, N. (2013). The STEM pathway for women: What has changed? *Gifted Child Quarterly*, 57(1), 39-55. doi:10.1177/0016986212460085

Hewlett, S. (2007). *Off-ramps and on-ramps: Keeping talented women on the road to success*. Boston, MA: Harvard Business School Publishing.

Do not place a period after the doi number.

Hira, R. (2010). U.S. Policy and the STEM workforce system. *American Behavioral Scientist*, 53, 949-961. doi:10.1177/0002764209356230

Hunt, J. (2010). *Why do women leave science and engineering?* Cambridge, MA: National Bureau of Economic Research. doi: 10.3386/w15853

Ibison, M., & Bailly, B. (2009). Women's advancement: One engineering firm's pathway to leadership. *American Water Works Association Journal*, 101(8), 44-51.

Johns, M. (2008). Understanding the gender gap in science, technology, engineering, and mathematics fields: Empirical approaches to a puzzling phenomenon. *Sex Roles*, 58, 590-591. doi:10.1007/s11199-007-9328-8

Jolly, J. (2009). Historical perspectives: The National Defense Education Act, current STEM initiative, and the gifted. *Gifted Child Today*, 32(2), 50-53. doi:10.4219/gct-2009-873

Jones, B., Paretti, M., Hein, S., & Knott, T. (2010). An analysis of motivation constructs with first-year engineering student: Relationships among expectancies, values, achievement, and career plans. *Journal of Engineering Education*, 99, 319-336. doi:10.1002/j.2168-9830.2010.tb01066.x

Jonsen, K., Tatli, A., Ozbilgin, M., & Bell, M. (2013). The tragedy of the uncommons: Reframing workforce diversity. *Human Relations*, 66(2), 271-294. doi:10.1177/0018726712466575

Kanter, R. M. (1977). *Work and family in the United States: A critical review and agenda for research and policy*. New York, NY: Russell Sage Foundation.

Katarzyna, K., & Dagmara, L. (2012). The importance of trust in manager-employee relationships. *International Journal of Electronic Business Management*, 10(3), 224-233.

Katz, F. (1968). *Autonomy and organization: The limits of social control*. New York, NY: Random House.

Katz, D., & Kahn, R. (1966). *The social psychology of organizations*. New York, NY: John Wiley & Sons.

Kerr, B., Multon, K., Syme, M., Fry, N., Owens, R., Hammond, M., & Robinson-Kurplus, S. (2012). Development of the distance from privilege measures: A tool for understanding the persistence of talented women in STEM. *Journal of Psychoeducational Assessment*, 30(1), 88-102. doi:10.1177/0734282911428198

Khanin, D., Turel, O., & Mahto, R. (2012). How to increase job satisfaction and reduce turnover intentions in the family firm: The family-business embeddedness perspective. *Family Business Review*, 25, 391-408. doi:10.1177/894486512441944

Kulow, M. D. (2012). Legislating a family friendly workplace: should it be done in the United States? *Northwestern Journal of Law and Social Policy*, 7(Winter), 88-115.

**Tip:** Make sure  
all URLs work.

Retrieved from  
<http://scholarlycommons.law.northwestern.edu/cgi/iewcontent.cgi?article=1081&context=njlsp>

Lambert, E., & Hogan, N. (2009). The importance of job satisfaction and organizational commitment in shaping turnover intent: A test of a causal model. *Criminal Justice Review*, 34(1), 96-118. doi:10.1177/0734016808324230

Latham, G. (2009). *Becoming the evidence based manager: Making the science of management work for you*. Boston, MA: Nicholas Brealey Publishing.

Lee, J. (2012). *Stereotypes, interest, and persistence: An examination of why women leave the science, technology, engineering, and math fields*. Long Beach, CA: California State University.

Leedy, P., & Ormrod, J. (2013). *Practical research: Planning and design* (10th ed.). Essex, England: Pearson Education Ltd.

Leslie, L., McClure, G., & Oaxaca, R. (1998). Women and minorities in science and engineering. *The Journal of Higher Education*, 69(3), 239-276.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage Publications, Inc.

Lincoln, A., Pincus, S., Koster, J., & Leboy, P. (2012). The Matilda effect in science: Awards and prizes in the US, 1990s and 2000s. *Social Studies of Science*, 42 307-320. doi:10.1177/0306312711435830

Locke, E. (1976). The nature and causes of job satisfaction. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology* (pp. 1297-1349). Chicago, IL: Rand McNally.

London, M. (1983). Toward a theory of career motivation. *Academy of Management Review*, 8, 620-630. doi:10.5465/AMR.1983.4284664

Lowell, B. (2010). A long view of America's immigration policy and the supply of foreign-born STEM workers in the United States. *American Behavioral Scientist*, 53, 1029-1044. doi:10.1177/0002764209356237

Malcolm, L., & Malcolm, S. (2011). The double bind: The next generation. *Harvard Educational Review*, 81(2), 162-171.

Marques, V. C. (2011). *Emerging leadership styles: Women's success strategy in engineering organizations and the new management paradigm*. (Doctoral dissertation). Available from ProQuest Dissertations and Theses database. (UMI No. 3454093)

Maslow, A. (1964). *Toward a psychology of being*. New York, NY: Van Nostrand Reinhold.

Matusovich, H., Streveler, R., & Miller, R. (2010). Why do students choose engineering? A qualitative, longitudinal investigation of student's motivational values. *Journal of Engineering Education*, 99(4), 289-303. doi:10.1002/j.2168-9830.2010.tb01064.x

Mavriplis, C., Heller, R., Bell, C., Dam, K., Yassinskaya, N., Shaw, M., & Sorensen, C. (2010). Mind the gap: Women in STEM career breaks. *Journal of Technology Management & Innovation*, 5(1), 140-151. Retrieved from <http://www.redalyc.org/articulo.oa?id=84716409011>.

Remove the blue font and underline from URLs.

McClaren, P. (2009). Women and minorities in science, technology, engineering and mathematics: Upping the numbers. *Canadian Journal of Administrative Sciences*, 26(2), 170-171. doi:10.1002/cjas.99

McClelland, D. (1984). *Motives, personality, and society: Selected papers*. New York, NY: Praeger Publishers.

McIlwee, J., & Robinson, J. (1992). *Women in engineering: Gender, power, and workplace culture*. Albany, NY: State University of New York Press.

Morganson, V., Jones, M., & Major, D. (2010). Understanding women's under representation in science, technology, engineering, and mathematics: The role of social coping. *The Career Development Quarterly*, 59(2) 169-179. doi:10.1002/j.21610045.2010.tb00060

National Science and Technology Council. (2013). *Summary from the Office of Science and Technology Policy*. Retrieved from <http://www.whitehouse.gov/administration/eop/ostp/nstc>

National Science and Technology Council Report. (2011). *Federal science, technology, engineering, and mathematics Education Portfolio: A report from the federal inventory of STEM education fast-track action committee on STEM education*. Retrieved from

**Tip:** Do not split a reference between pages. This information should be moved to the next page.

- [https://www.whitehouse.gov/sites/default/files/microsites/ostp/stem\\_stratplan\\_2013.pdf](https://www.whitehouse.gov/sites/default/files/microsites/ostp/stem_stratplan_2013.pdf)
- National Science Foundation Report. (2012). Science and engineering labor force. Retrieved from <https://www.nsf.gov/statistics/seind12/pdf/seind12.pdf>
- Nebel, E. (1978). Motivation, leadership, and employee performance: A review. *Cornell Hotel and Restaurant Administration Quarterly*, 19(1) 62-69. doi:10.1177/001088047801900112
- Noe, R., Hollenbeck, J., Gerhart, B., & Wright, P. (2010). *Human resource management: Gaining a competitive advantage*, 8<sup>th</sup> Ed. New York, NY: McGraw-Hill Education.
- Pas, B., Peters, P., Doorewaard, H., Eisinga, R., & Lagro-Janssen, T. (2014). Supporting 'superwomen'? : Conflicting role prescriptions, gender-equality arrangements and career motivation among Dutch women physicians. *Human Relations*, 67, 175-204. doi:1177/0018726713489998
- Powell, D. (1992). Women in engineering: Canadian panel calls for more. *Science*, 256, 607. doi: 10.1126/science.1585171
- Preston, A. (2004). Plugging the leaks in the scientific workforce. *Issues in Science and Technology*, 20(4), 69-74. Retrieved from: <http://www.issues.org/20.4/preston.html>
- Pringle, J., & Dixon, K. (2003). Re-incarnating life in the careers of women. *Career Development International*, 8(6), 291-300. doi:10.1108/13620430310496107
- Rhea, J. (1996). As their 'shelf lives' shrink, an NSF study finds half of U.S. engineers working outside engineering. *Research Technology Management*, 39(4), 2-4. Retrieved from [http://www.iriweb.org/Main/Library/RTM\\_Journal/RTM\\_Index/Public\\_Site/RTM/RTM\\_Journal\\_Online.aspx?hkey=5ec79d60-99c3-4321-9cac-ed96e24bfb87](http://www.iriweb.org/Main/Library/RTM_Journal/RTM_Index/Public_Site/RTM/RTM_Journal_Online.aspx?hkey=5ec79d60-99c3-4321-9cac-ed96e24bfb87)
- Robbins, S., & Judge, T. (2009). *Organizational behavior*. Upper Saddle River, NJ: Pearson Prentice Hall.
- Rosenthal, L., London, B., Sheri, R., & Lobel, M. (2011). The roles of perceived identity compatibility and social support for women in a single-sex STEM program at a co-educational university. *Sex Roles*, 65, 725-736. doi:10.1007/s11199-011-99450
- Sealy, R., & Singh, V. (2010). The importance of role models and demographic context for senior women's work identity development. *International Journal of Management Reviews*, 12(3), 284-300. doi:10.1111/j.1468-2370.2009.00262.x

- Servon, L., & Visser, M. (2011). Progress hindered: The retention and advancement of women in science, engineering and technology careers. *Human Resources Management Journal*, 21(3), 272-284. doi:10.1111/j.1748-8583.2010.00152.x
- Smith, C., Santucci, D., Xu, S., Cox, A., & Henderson, K. (2012). "I love my job but . . .": A narrative analysis of women's perceptions of their careers in parks and recreation. *Journal of Leisure Research*, 44(1), 52-69. Retrieved from <http://js.sagamorepub.com/jlr/article/view/2509>
- Sperling, J. H. (2013). Reframing the work-family conflict debate by rejecting the ideal parent norm. *The American University Journal of Gender, Social Policy, & the Law*, 22(1), 47-90. Retrieved from <http://digitalcommons.wcl.american.edu/cgi/viewcontent.cgi?article=1625&context=jgspl>
- Sullivan, S. E., & Baruch, Y. (2009). Advances in career theory and research: A critical review and agenda for future exploration. *Journal of Management*, 35, 1542-1571. doi:10.1177/0149206309350082
- Stake, R. (2010). *Qualitative research: Studying how things work*. New York, NY: The Guilford Press.
- Steers, R., Mowday, R., & Shapiro, D. (2004). The future of work motivation theory. *Academy of Management Review*, 29, 379-387.
- Szelenyi, K., & Inkelas, K. (2011). The role of living-learning programs in women's plans to attend graduate school in STEM fields. *Research in Higher Education*, 52, 349-369. doi:10.1007/s11162-010-9197-9
- Thilmany, J. (2008). Not a welcoming place. *EMBO Reports*, 9, 951-953. doi:10.1038/embor.2008.178
- Tomlinson, J., Olsen, W., Neff, D., Purdam, K., & Mehta, S. (2005). *Examining the potential for women returners to work in areas of high occupational gender segregation, report for the department of trade and industry*. Retrieved from [http://webarchive.nationalarchives.gov.uk/+http://www.dti.gov.uk/training\\_development/Women\\_Returners\\_DTI\\_November2005.pdf](http://webarchive.nationalarchives.gov.uk/+http://www.dti.gov.uk/training_development/Women_Returners_DTI_November2005.pdf)
- United States Census Bureau. (2011). *Statistical abstract of the United States (131<sup>st</sup> Ed.): Section 16: Science and Technology*. Retrieved from <http://www.census.gov/prod/2011pubs/11statab/science.pdf>
- United States Department of Justice Civil Rights Division. (2001). *Title IX legal manual*. Retrieved from <http://www.justice.gov/crt/about/cor/coord/ixlegal.pdf>

- United States Department of Commerce Report. (2013). *Disparities in STEM employment, by sex, race, and Hispanic origin*. Retrieved from <http://www.census.gov/prod/2013pubs/acs-24.pdf>
- United States Department of Labor Report. (2011). *Women's employment during the recovery*. Retrieved from [http://www.dol.gov/\\_sec/media/reports/FemaleLaborForce/FemaleLaborForce.pdf](http://www.dol.gov/_sec/media/reports/FemaleLaborForce/FemaleLaborForce.pdf)
- Urquhart, C. (2013). *Grounded theory for qualitative research*. London, England: Sage Publishing.
- Varma, R. (2010). India-born in the U.S. science and engineering workforce perceptions of women in management: A thematic analysis of razing the glass ceiling. *American Behavioral Scientist*, 53, 1064-1078. doi:10.1177/0002764209
- Varma, R., & Freehill, L. (2010). Special issue on science and technology workforce. *American Behavioral Scientist*, 53, 943-948. doi:10.1177/0002764209356229
- Washburn, M. (2007). Cultivating greater acceptance of women in technology: A pilot study. *International Journal of Information and Communication Technology Education*, 3(1), 22-35. Retrieved from <http://www.inderscience.com/jhome.php?jcode=ijict>
- Wittmer, J. E., & Martin, J. L. (2013). Lessons learned from a part-time worker typology applied to full-timers. *American Journal of Business*, 28(2), 210-232. doi:10.1108/AJB-05-2013-0032
- Yin, R. (2011). *Qualitative research from start to finish*. New York, NY: The Guilford Press.

## Appendix A: Email to Potential Participants

FROM: Student Name  
TO: Potential Study Participant  
SUBJECT: Student research of employee motivation of women in STEM professions

I am in the process of conducting my doctoral dissertation by completing a research study on what motivates women to continue their careers in science, technology, engineering, and math (STEM) professions, and I am asking for your help. This email is sent to you to request your voluntary participation in my study.

The time commitment is minimal-just 1-2 hours of your time. I am seeking to interview women in STEM professions who fit into one of two categories:

1. Women in STEM professions who have been in the profession continuously for more than 10 years (where the definition of continuously is that they have not taken leave from work or had a gap between jobs that lasted more than 26 weeks).
2. Women in STEM professions who have been in the profession for a total of 10 years, where they left their profession at some time, for a period of at least 26 weeks, and subsequently decided to return to the profession. (The reason for the 26 week+ leave period can be any reason, personal or professional, and the participant will not be requested to share the reason for leave).

By taking part, your contribution may help other women by providing them with insights on how to have successful careers in STEM professions.

To participate, please reply back to this email. I encourage you to forward this email to friends or colleagues who you think may be interested.

Thank you in advance for helping me with this important study.

Sincerely,  
Student Name  
University of the Rockies Doctoral Student

**Tip:** Be sure that the titles listed for each Appendix matches the titles listed in the Table of Contents.

## Appendix B: Demographic Questionnaire

**1. What is your STEM discipline (select the closest that applies)**

- ☐ Science
- ☐ Engineering
- ☐ Technology
- ☐ Math

**2. How many years have you been working in STEM fields? (If you have taken a break from the profession and have come back, add the years of service together. Do not include the time for the break in the total amount of years)**

- ☐ <10
- ☐ 10-15
- ☐ 15-20
- ☐ 20-25
- ☐ 25-30
- ☐ >30

**3. Have you ever taken a break from the STEM professions for any reason that lasted over 26 weeks?**

- ☐ No. I have not taken a break that has lasted over 26 weeks
- ☐ Yes, my break from the profession lasted between 6 months to 1 year
- ☐ Yes, my break from the profession lasted between 1 year to 2 years
- ☐ Yes, my break from the profession lasted between 2 years and 5 years
- ☐ Yes, my break from the profession was over 5 years

**4. What is your age?**

- ☐ 21-30
- ☐ 31-40
- ☐ 41-50
- ☐ 51-60
- ☐ 60 or over
- ☐ Decline to answer

**5. What is your race?**

- |   |   |
|---|---|
| <input type="radio"/> African-American, Black | <input type="radio"/> White Caucasian – Non Hispanic  |
| <input type="radio"/> Chinese                 | <input type="radio"/> Hispanic or Latino              |
| <input type="radio"/> Filipino                | <input type="radio"/> Mexican                         |
| <input type="radio"/> Indian                  | <input type="radio"/> American Indian, Alaskan Native |
| <input type="radio"/> Japanese                | <input type="radio"/> Middle Eastern                  |
| <input type="radio"/> Korean                  | <input type="radio"/> More than one race              |

- ☐ Southeast Asian
- ☐ African-American, Black
- ☐ Unknown or not reported
- ☐ Decline to answer

**6. What is the highest level of education you have completed?**

- ☐ Some college
- ☐ 4-year college degree (e.g. B.S., B.A.)
- ☐ Master's degree
- ☐ Doctoral degree
- ☐ Professional degree (JD, MD)
- ☐ Other
- ☐ Decline to answer

**7. The organization you work for is in which of the following:**

- ☐ Public Sector
- ☐ Private Sector
- ☐ Not-for-Profit
- ☐ Unknown
- ☐ Other
- ☐ Decline to answer

## Appendix C: Consent Form

Informed Consent Form for a study on *Women Staying in STEM Professions Long Term: A Motivation Model*. You are being invited to participate in a research project conducted by Student Name, who is a doctoral candidate at the University of the Rockies.

You are invited to participate in a research study about your personal experiences throughout your career, including any barriers that you may have overcome and/or factors that motivated you to stay. The interview will take approximately 60 minutes. The potential risks associated with this study are minimal. You will be given the opportunity to add additional information at your discretion at the end of the interview.

Your interview will be used to contribute to empirical evidence in a growing body of research on STEM professions, primarily aimed at retaining women in these professions. Women in STEM professions in the future may benefit from your experience.

Your participation is voluntary and you have the right to withdraw your consent or discontinue participation at any time. You also have the right to refuse to answer any question(s) for any reason during the interview. Although the interview questions are not intended to be intrusive or cause distress, if you feel distressed at any time, you have the right to withdraw. In the unlikely event that I, the interviewer, sense distress, I will stop the interview and recommend that you seek local resources to assist you.

A description of your experiences will be part of the published study. Your name will be replaced with a pseudonym to protect your anonymity and ensure that your individual privacy will be maintained in all publications or presentations.

If you use any company names or names of colleagues/managers during your interview, those names will not be used in any publications or presentations associated with this study. Instead, 'the company' or 'the participant's manager' or similar language will be used.

Our conversation will be digitally recorded and later transcribed. Upon completion of this study, and subsequent approval of this research by my committee, all recorded materials will be erased after seven years. The same approach will be used with regards to any written notes or memos documented by the researcher.

If you have questions regarding your rights as a research participant or any concerns regarding this project, you may report them – confidentially, if you wish – to the University of the Rockies Institution Review Board at [dissertation.online@rockies.edu](mailto:dissertation.online@rockies.edu).

Consent given by \_\_\_\_\_ on \_\_\_\_\_ and received by Student Name.

## Appendix D: Interview Protocol

### Initial Questions for Interviews

1. You signed an informed consent before our interview. I would like to record you acknowledging that you have read this, that you understand it, and that you give consent to participate. Can you please confirm your consent to participate?
2. Briefly, what do you do now professionally?
3. When you were growing up, what types of careers did you think about pursuing?
4. When did you first think of becoming a \_\_\_\_\_?
5. Tell me why you went into your field of study. Was it your first choice?
6. How would you describe your career?
7. What do you enjoy most about your profession?
8. As you look back on your career, was there ever a situation where you found yourself at a crossroads of continuing in your field versus choosing another path? <If so> Can you describe this situation? What influenced your decision?
9. For linear participants: Have you ever thought of leaving? For the non-linear participants: Have you ever thought of leaving again? What influenced your decision to stay?
10. For non-linear career participants: When you returned to the workplace, was there anyone or anything in particular that eased your transition back?
11. What makes you stay (or what made you come back after your leave)?
  - a. Which are the most important reasons?
  - b. Why are those reasons important to you?
  - c. Continue to ask more about contributing factors

12. Is there anything specific that influenced any big shifts or changes along the way?
13. Were there any changes for you, during your career or your life that changed the motivating factors for you? When you first started your career, what were the drivers that motivated you? Is what makes you stay-the same as what motivated you to enter in the first place?
14. I'm interested in understanding the effects of the changes in the workplace itself, too, that may have been instrumental in you continuing in STEM professions.
- a. There has been quite a bit documented on women in STEM that leads to believe that the environment in the workplace can be somewhat unwelcoming for women to find career success. Has there been anything in particular, either in the policies or the culture that has been key to your career longevity in the profession?
  - b. Thinking back on your career are there any changes that were instituted in the workplace that you thought were positive for women in STEM professions?
  - c. Would you consider these changes key to motivating you to stay?
15. Is there anything else you would like to emphasize about your work experience?

Question added following participant 4:

16. What does your workplace do specifically that keeps things challenging and interesting for you?
17. Participants thus far are suggesting that there has been a shift in the workplace—a positive shift—moving away from the hostile environment that is written in the literature about the STEM workplace culture. There also seems to be a tie-in to self-

confidence for the women I have interviewed so far. Have you seen a shift in workplace culture and / or your own confidence? What is the timing for both?

Questions added following participant 8:

18. Flexibility and predictability have emerged as a theme of importance to most participants. Can you comment on this? Does your workplace have any policies that help create this environment? Is your workplace culture amenable to helping create more flexible or predictable workdays for you when / if you needed it?
19. Some participants are commenting on what one participant termed as a modern-day barrier for growth opportunities: part-time work. Can you comment on how part-time work is viewed in the workplace, if you see it as a barrier for advancement?
20. Some participants think women create barriers for themselves with regard to being complacent with their careers as compared to men. What is your perspective on this? Do you view any of your choices as a barrier that you created versus the culture of the company?
21. What do you think technology has created for the environment at work, now that people are sometimes working virtually versus in the office?
22. Some participants have emphasized building their reputation as a key part of being considered for growth opportunities. What do you think? What has helped or hindered your reputation building in your career?

Questions added following participant 12:

23. Some participants interviewed so far have emphasized being credible and feeling valued as something that has motivated them, but they seem to reach this at different points in their careers. Can you speak to whether you agree with the emphasis on

credibility/feeling valued and if so, what contributed to that for you and if you remember, at what point did you feel you reached this sense of yourself?

24. Many participants have emphasized that opportunities for growth are a key part of motivating them. There does not seem to be a consistent or direct path emerging. There is no one recipe for growth success. When you have sought growth opportunities, what has been successful for you? What has your company done that has helped? What barriers to growth, if any, have you experienced?

**Tip:** If you used an instrument that was previously published, you must have permission from the copyright holder to include it in your appendix.

## Appendix E: Non-Disclosure Form

Student First Name: \_\_\_\_\_ Last Name: \_\_\_\_\_

**Title of Dissertation:** Women Staying in STEM Professions Long Term: A Motivational Model

Name of Service Provider: \_\_\_\_\_

Address: \_\_\_\_\_

**Tip:** To protect individuals, block out personal addresses and/or phone numbers.

**Type of Assistance:** Transcribing audio tapes / Recording conference call logs

I hereby agree not to disclose or share any confidential information pertaining to the above-referenced research study obtained in the process of providing the services identified above. Confidential information includes but is not restricted to research participants' names, demographic characteristics, or any other personally identifying information; assessment instrument responses or scores; participants' ratings, narrative responses, or comments, whether in response to questions or spontaneous; and / or any other information that might compromise the confidentiality or anonymity of the participants. I hereby agree to refrain from discussing with or disclosing any confidential information regarding research participants to any persons other than the researcher, the members of the UoR dissertation committee, or the UoR IRB. All research materials in my possession will be stored securely and no other parties will have access to them. I agree to report immediately to the UoR IRB any breach, whether suspected or known, of this confidentiality statement regarding the above research project.

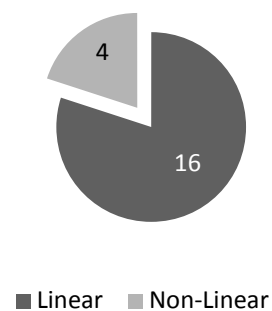
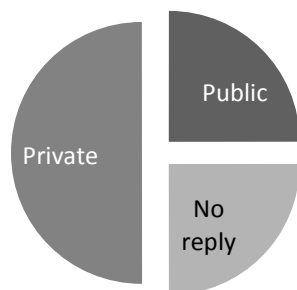
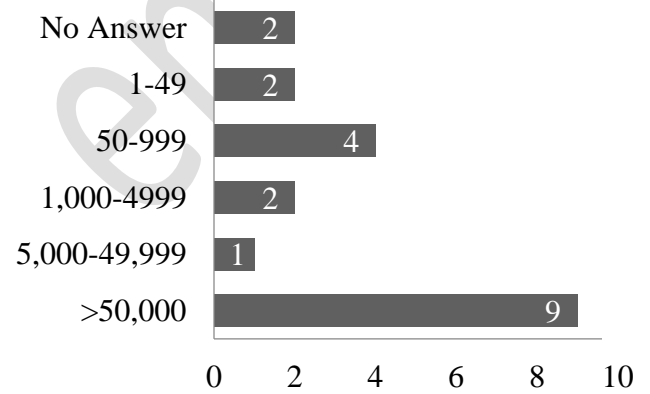
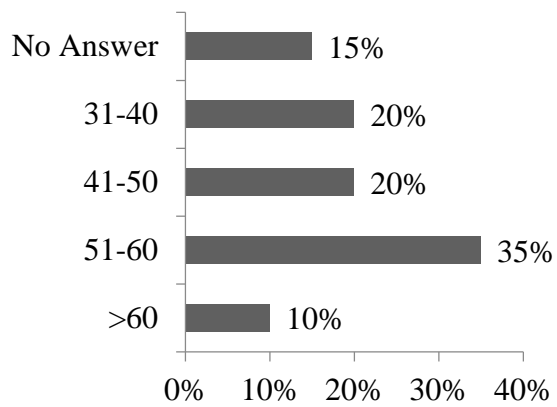
Signature: \_\_\_\_\_ Date: \_\_\_\_\_

**Tip:** Any [tables/figures](#) included in the Appendix must still be formatted in APA style.

## Appendix F: Participant Demographics

Total Years in STEM	Number of Participants
10-15	4
15-20	4
20-25	2
25-30	4
>30	6

STEM Profession Type	Number of Participants
Science	4
Technology	4
Engineering	7
Math	5



Business Sector

Participant Type

## Appendix G: Open Coding Results

Codes 1-14	Codes 14-28	Codes 29-42
Likes math	Expressed believing in capabilities	Changes in workplace culture – not hostile now
Likes science	Expressed maturing into confidence	Lateral moves are good capability building
Continuously learning	Expressed confidence throughout career	Evidence of advancement opportunities
Being part of teams	Peer relationships	Networking
Challenging	Workplace policies	Investment via training is available
Identifying with profession	Recognition and rewards	Career is limited due to family priorities
Creating	Client relationships	Fulfillment of growing others
Problem solving	Sponsor	Credibility
Variety of work	Direct Managers	Reputation
Flexibility/ predictability	Hostile environment	Visibility
Expressed having a niche	Good environment – good	Technology advancements effect on workplace
Societal trends towards gender based work and home	Career advancement is limited for the part-time worker	What motivates me has changed over time
Personal relationships outside of work	Priority of Family	What motivates me has not changed over time
Lack of evidence of advancement opportunities	Opportunistic outlook	Compensation

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