

**Traversing the Doctorate**

Edited by Tanya Machin, Marc Clara and Patrick Danaher

**Experiencing the Journey Together: The Role of Social Support During the Doctorate****Tanya M. Machin and Renée L. Parsons-Smith**

Completing a doctorate can be a solitary and sometimes stressful experience, which is further exacerbated by the underlying nature and structure of this particular degree. The issue of social support during the doctoral journey is important to address given its relationship with well-being. Additionally, social isolation has been identified as a major contributing factor of compromised psychological and physical health. Indeed, adequate social support becomes a critical component if one is to successfully navigate the PhD terrain. This chapter will highlight the protective benefits associated with social support, as well as examine the empirical findings on the negative effects of social isolation during the doctoral journey. Additionally, this chapter will provide two contrasting student experiences of social isolation, specifically relating to on-campus versus off-campus modes of study. Finally, the provision of practical strategies to facilitate increased social support will be provided.

**Introduction**

Social support is an important predictor of graduate student well-being (The Graduate Assembly, 2014), with this finding drawing attention to the importance of this issue for university students. Experiencing meaningful relationships and regularly associating with like-minded peers provides valuable opportunities for common obstacles and stressors to be shared and understood. Furthermore, a good network of friends and colleagues have the potential to mediate stress, facilitate psychological and physical health, as well as assist academic progress. This chapter highlights the protective benefits of social support, as well as the potential negative effects of social isolation for doctoral students. By means of critical reflection, two contrasting experiences of social isolation during the doctoral journey are

provided. Finally, the chapter concludes with a selection of practical strategies to increase social support at the student, supervisor, and administrative levels.

### **The Benefits of Social Support**

Human beings are profoundly social creatures. There is a vast amount of literature emphasising not only the strong need we all have to belong, but also the various positive benefits that social relationships can have on our lives (e.g., Baumeister & Leary, 1995; Leary & Baumeister, 2000). From an evolutionary perspective, the emotional encouragement, practical assistance, and empathetic concern that exemplify these connections makes intuitive sense. For example, when we are ill we are more likely to receive the physical care and psychological support we need if we maintain close social bonds. The term social support can be broadly described as giving or receiving assistance, care, and encouragement (Langford, Bowsher, Maloney, & Lillis, 1997). More specifically, social support encompasses four unique functions: emotional support (i.e., caring for and trusting in others), instrumental support (i.e., helping others according to their specific need), information support (i.e., advice-giving or problem solving), and appraisal support (i.e., providing feedback; House, 1981 as cited in Heaney & Israel, 2008). Further to this, social support assumes an expectation of helpful and friendly interactions as opposed to those characterised by disapproval or condemnation (Heaney & Israel, 2008).

Importantly, close social ties have a functional role in the maintenance of well-being (Kawachi & Berkman, 2001). Jairam and Kahl (2012) emphasise that those who experience quality social support on a regular basis are more likely to experience a lower level of stress, as well as fewer physical (Berkman 1995; Reblin & Uchino, 2008) and psychological problems. Indeed, numerous positive effects of social support have been identified across many different domains of life. For example, enhanced self-esteem and improved emotional experiences are among some of the psychological benefits that have previously been

identified (Zimet, Dahlem, Zimet, & Farley, 1988). In the context of employment, studies have shown that social support can reduce workplace strains and mitigate perceived workplace stressors (Viswesvaran, Sanchez, & Fisher, 1999) as well as function as a buffer against stress and burnout (Baruch-Feldman, Brondolo, Ben-Dayana, & Schwartz, 2002). In a study by Baruch-Feldman et al. (2002), the positive effects of social support were generally reflected in sense of job satisfaction and increased work productivity.

Epidemiological health-related research has found similar protective properties. Patients with social support have been found to report lower levels of cancer pain, lower levels of chest pain following heart surgery, and generally require less pain medication (King, Reis, Porter, & Norsen, 1993; Kulik & Mahler, 1989; Langford et al., 1997; Zaza & Baine, 2002). These findings suggest that social support operates as an effective coping strategy under both psychologically demanding and physiologically painful circumstances (Meeuwesen, 2006). Additionally, regular social interaction has been identified as a consistent predictor of disease outcomes for diabetes, hypertension, arthritis, and emphysema (Reblin & Uchino, 2008; Tomaka, Thompson, & Palacios, 2006). Further to this, cardiovascular, endocrine, and immune system functions have also been found to be positively impacted by adequate social support (Uchino, 2006), as have overt health-related behaviours (Cohen & Wills, 1985; Reblin & Uchino, 2008).

Taken together, it is clear that social support plays a critical role in relationships, as well as provides a protective element necessary for both physical health and mental well-being. Furthermore, social support is considered vital in new or unfamiliar environments, or situations of high stress (Machielse, 2006). Indeed, attending university and commencing a doctoral degree would certainly fit this criteria. Increased academic workload and new responsibilities have been identified as two of the most common sources of stress for university students (Ross, Neibling, & Heckert, 1999). More specifically, doctoral students

“...face enormous demands upon their time, energy, intelligence, endurance, patience, and organizational skills” (Committee on the College Student, 2000, p. 1), meaning that those undertaking a PhD are at increased risk of experiencing multiple stressors over extended periods of time. To add to this, design characteristics, mode of study, and unique experiences associated with the PhD program have the potential to put doctoral students at increased risk of social isolation. Given the strong link between social support and psychological as well as physical health, it is important to consider how social isolation has the potential to negatively impact doctoral students’ well-being.

### **Social Isolation and the Doctoral Program**

Hortulanus and Machielse (2006) described social isolation as a lack of; or perceived deficiency in meaningful social relationships. The term social isolation is often used in reference to individuals who are disengaged or feel disconnected from social relationships. It is important to note that loneliness can also be experienced by those who feel socially isolated, and similarly refers to a perceived lack of intimacy within social contexts (Berg, Mellstrom, Persson, & Svanborg, 1981; Janta, Lugosi, & Brown, 2014). Poor health behaviours and biological risk factors are some of the many negative effects of social isolation (Pressman et al., 2005; Shankar, McMunn, Banks, & Steptoe, 2011). Those who feel socially isolated are also more likely to experience mental health issues (i.e., depression) and increased levels of stress (House, 2001, as cited in Ali & Kohun, 2007). Indeed, the consequences of social isolation can be severe, given that social isolation is a known risk factor for morbidity and mortality (Berkman 1995; Cacippo & Hawkey, 2003; Holt-Lundstad et al., 2015).

Unfortunately, social isolation is a potential hazard to those negotiating the doctoral journey. Doctoral students have been found to experience increased levels of stress compared with the general population, and a portion of this stress has been attributed directly

to program structure (Cahir & Morris, 1991). A PhD program is typically outcome and student driven by means of a dissertation (Beutel et al., 2010). Although design characteristics can and do vary according to different countries, institutional requirements, and disciplines (Janta et al., 2014), the Western-style academic model tends towards a heavy focus on self-reliance. This lack of a clear accountability framework means that motivation, momentum, time, and resources must be successfully self-managed to achieve completion (Ali & Kohun, 2007; Beutel, 2010; Fisher, 2006). Such stresses have been found to “contribute to feelings of social isolation” (Beutel et al., 2010, p. 69). Importantly, social isolation has been identified as a key element in doctoral student attrition (Ali & Kohun, 2006).

Further, the chosen mode of study may also contribute to a students’ susceptibility to social isolation. Large metropolitan universities may have multiple doctoral students from the same discipline working side-by-side in a laboratory or similarly structured research environment. Initially this type of situation may appear conducive to social support however, competition for resources between students may add more complexity to peer relationships. Conversely, smaller universities may have fewer PhD enrolments, leaving some students unable to regularly interact with like-minded peers. Additionally, doctoral programs can be delivered via more flexible methods, such as through distance education. Under these circumstances external postgraduate students may predominantly work from home, sometimes living at great distances from their university of choice. Given these considerations, it is obvious that the amount of face-to-face contact, and number of opportunities to interact and make connections with other PhD students can be widely variable.

Academic progress is of high importance to university students (The Graduate Assembly, 2014), and students who feel socially isolated are more likely to have difficulties

attaining academic success (Walton & Cohen, 2007). Hefner and Eisenberg (2009) note that university students with qualities considered *different* from the majority of other students (i.e., ethnicity, being an international student, and low social economic status) may be even more vulnerable to social isolation and its negative effects. Furthermore, female doctoral students have been found to experience less support and more stress compared with males (Goplerud, 1980; Hodgson & Simoni, 1995). Close social ties have the ability to improve access to work-related resources (i.e., expertise) and foster valuable connections (i.e., networking) in discipline-specific environments (Hortulanus & Machielse, 2006).

### **Critical Reflections of Social Isolation and Social Support**

Critical reflection is a tool that is utilised in disciplines such as nursing, education, and psychology, and involves reflecting on specific experiences that may be personally challenging (Bolton, 2010). Thus, critical reflection helps professional practitioners to clearly identify idiosyncratic thought processes, feelings, beliefs, and values (Bolton, 2010). Through this process of reflection, faulty implicit beliefs, and personal biases can be better identified and challenged, together with any other potential behaviours that may negatively impact work-related situations (Bolton, 2010). In this section, both authors share their perceptions of social support and social isolation by ways of critical reflection. Tanya is an on-campus doctoral student, while Renée is an external doctoral student based three hours from her university campus. The author's personal experiences highlight that social isolation can occur during the doctoral journey, regardless of chosen modes of study.

**Tanya:** My decision to gain my doctorate was twofold, that of a career change and a lifestyle decision as well. After working for years in careers of high expectations and pressure, the thought of being a full time, on-campus student doing research was incredibly exciting. On my first day at university, both my Head of School and supervisor helped me

arrange and complete the necessary organisational and administrative requirements. I was also introduced to administrative staff who arranged a place for me to start work.

My university provides all on-campus PhD students with a secure place to work, a locker to store personal belongings and a small filing cabinet for important documents. My work space was a cubicle located in a research room that could house up to 45 doctoral students and up to 5 post-doctoral fellows. My initial thoughts of this space were this would be a bustling hub of students interacting with each other and exchanging ideas, however the reality was very different. When I started my doctorate there were approximately twenty students allocated to that research room and only one other student in my discipline (psychology). At the start I thought the small numbers of students would be a blessing and enable me to work without interruption, however I soon found the students became both a stressor and support. The majority of students viewed this room as *only* a work space, a place to come to work solely on their research project and not a place to socialise or ask questions of others. Basic courtesies like saying good morning were often discouraged by glaring, with some students not acknowledging simple greetings or even looking at you. It was not unusual for signs to appear in the research room if there was too much talking, reminding students that this was a work area not an area for socialising. While there were two or three students who were supportive of each other (including me), the general atmosphere of the room made me feel isolated in a crowd of people, and I entertained thoughts about not coming to campus at all!

After two months of experiencing little meaningful interaction with others, a post-graduate orientation was advertised to which I attended. I spent time chatting to another new student (from a different discipline) and we discussed our research, our explorations of the campus as well as different opportunities available. During our discussions she mentioned two different meetings she was regularly attending. The first was an informal get-together

where education doctoral students could share their research challenges and triumphs. The second group was a more formal fortnightly meeting with post graduate students and early career researchers (PGEER) from different disciplines across the university. These PGEER meetings contained assigned readings and research/researcher spotlights. I started to attend both of these meetings and found these groups personally and professionally supportive and encouraging. These meetings provided a place outside of the supervisor relationship, where I could learn more about research, the processes and expectations, as well as allowing me to escape from the isolation of my work space. The students who regularly attended these groups typically shared their ideas, brainstormed about research issues, as well as offering support and assistance to each other.

During this time I also reflected on other external doctoral students that I had previously met who did not attend any forums or groups and the impact that must have on them. I spent time discussing this issue with Renee, an external student whom I had previously met at a psychology conference. If I felt isolated in a crowd of students, how isolated must she feel, as an external student. These conversations prompted me to start a fortnightly forum for psychology students, with the option for external students to phone in to these organised sessions. This meeting was accompanied with an online discussion group where students could read about up-coming events and other important issues. While attendance at these sessions varied, there was a core group of both on-campus and external students who were able to develop supportive relationships with each other. Certainly for me this was an additional benefit as I could finally discuss my research with others who understood the “language” I used. Attendance at all three of these groups has offered me multiple opportunities to develop supportive relationships with other doctoral travellers that will ultimately, make my doctoral journey as easier road to travel.

**Renée:** For me, the primary advantage of studying a doctoral degree externally was flexibility. Being a substantial commitment over an extended period of time, the convenience establishing a specifically tailored study routine was undeniable. Additionally, my university of choice was located 300+km away, so studying via external mode was the only viable option available at the time. Having previously completed an undergraduate and Honours degree at the same university, I was already familiar with the pros and cons of distance education. I felt confident and motivated to undertake the next step in my learning journey. I was excited to finally be studying at PhD level. Indeed, it was always my ultimate goal...

During the early stages of the program I visited the university campus on a monthly basis. Regular contact with my supervisors and other support staff members was necessary to meet preliminary milestones, such as the confirmation of candidature. My initial experiences of being on-campus were beneficial and productive both on a professional and personal level. On a professional level I was able to observe the academic culture and learn about the roles and duties associated with academic appointments within my discipline. On a personal level I was able to meet and interact with like-minded peers at a similar point in their academic careers. However, with time being my most precious commodity, my schedule typically involved back-to-back meetings which left little time to actually *participate* in the academic culture on-campus, nor *establish* meaningful relationships; professional or otherwise. While on-campus doctoral students were communicating, collaborating, and commiserating with one another, I became increasingly aware of what the *convenience* of studying externally was actually costing me: social interaction.

Confronted with the idea that I would be tackling the rigours and stressors of a PhD alone, I was determined to negate my newfound enemy: social isolation. I began talking to my family members and friends about various study issues and research problems. I was convinced that even a little understanding would be just enough to provide me with the social

support I needed to succeed. I described my lack of time, my problems with data, my writers block, my fear of failure, my constant worry that I would not be able to finish on time... Despite their best efforts, my existing support networks could not readily understand the unique challenges I faced. Consequently, their support left me feeling frustrated and increasingly misunderstood, which only served to further reinforce my feelings of social isolation. Finally, upon hearing the exasperated words “*you’re not Robinson Crusoe Renée!*”, in that instant, my position became perfectly clear—I was... (*Robinson Crusoe was a fictional book character who was ship wrecked on what he perceived to be was an uninhabited island*).

For me, meeting and befriending another PhD student served as an invaluable source of beneficial social support. Not only did she understand the typical rigours and stressors of the PhD process, but she also understood problems unique to our discipline, as well as specific to my research project. Suddenly, I did not feel so *alone* anymore. I found it comforting to know that many of the challenges and frustrations I was experiencing were fairly typical of the PhD process. This gave me a newfound confidence in my ability to reach my end-goal. Upon reflection, not only did this friendship serve as a buffer against PhD stress, but it also provided me with additional opportunities to network. Being an on-campus student, Tanya experienced more opportunities to make social contacts within our discipline. So, when visiting the University for work-related reasons, she would introduce me to other students and academics from our field. As I slowly assimilated into the on-campus research culture, the importance of communicating and interacting with like-minded peers truly became apparent. I was able to get ad hoc advice involving methodologies, and expert opinions on ethics and statistics. As I got to know more people, more opportunities became available, including collaborations on interesting projects. Additionally, I was offered work in related academic roles. Overall, having the understanding and support of like-minded peers,

and participating in the research culture provided me with the social support I needed to help me to successfully navigate the doctoral terrain.

### **Practical Strategies to Establish and Enhance Social Support**

Embarking on the doctoral journey constitutes a major life transition. Undeniably, most students will already have sources of quality support. However, it may be difficult for existing social ties to understand the complexities associated with studying at PhD level. Not surprisingly, such networks may lack the requisite experiential or specialised knowledge required to provide effective social support (Heaney & Israel, 2008). Although students may communicate frequently with supervisors for practical guidance and research-related assistance, doctoral students also need to develop quality social connections with other students to better negotiate common program-related stressors and discipline-specific issues. While there is a lot of literature outlining various strategies to encourage students to increase social support networks, here we discuss the kinds of experiences that we have both found helpful from an on-campus and external student perspective.

#### ***Administrative opportunities***

*“Socialization, whether it would be educational or otherwise, leads to more inclusion, support and understanding”* (Ali & Kohun, 2006, p. 27).

Initial information about program requirements can be limited or confusing for new students, which has been found to contribute to feelings of doctoral student isolation (Ali & Kohun, 2006). In an attempt to clarify program expectations, most universities will host orientation events. Such events can be discipline specific or open to all new students (i.e., on-campus and external), but each usually have a common goal of outlining need-to-know information for new enrollees. Aside from meeting peers, these orientation sessions also provide rare opportunities to meet administrative staff and key support personnel who will assist with organisational requirements. For external students, computer-mediated

communication tools (e.g., Skype, Zoom, etc.) may provide remote access to these events. Participating in such events can enable new students to “exchange experiences when dealing with new situations” (Ali & Kohun, 2007, p. 43) which has the potential to help minimise doctoral confusion. It is also considered the first step towards integration into the social environment and new culture of doctoral studies.

Universities also offer regular training opportunities for doctoral students. Attending research training workshops have the dual purpose of building your research skills and requisite level of knowledge, as well as increase valuable opportunities for contact with peers and faculty personnel. Vital student-to-student and student-to-faculty lines of communication can be opened (Ali & Kohun, 2006), which in turn have the potential to further grow your social and administrative networks. Many of these training sessions have limited numbers, meaning that these meetings may be more conducive to *getting to know* others. Additionally, finding out where other PhD students study may also facilitate social adjustment through the opportunity to connect with others. Many universities provide permanent research spaces or *hot desks* for on-campus doctoral students. Not only will a permanent office space provide a place to work, but also a chance to interact with fellow students. For external students, ask your degree administrators what provisions are in place for on-campus visits, and where other PhD students are usually located.

### *Supervisor support*

*“Social interaction with one’s peers and faculty becomes closely linked not only to one’s intellectual development, but also to the development of important skills required for doctoral completion” (Tinto, 1993, p. 232).*

There are reams of information, including chapters in this book that deal specifically with the supervisory relationship and getting the best out of it. While the nature of the student-supervisor relationship is dynamic, and likely to vary according to idiosyncratic differences, what is clear is that supervisors can be a source of valuable information about social networking opportunities. Many supervisors oversee multiple PhD candidates, meaning that your supervisor may be able to put you in touch with peers working on similar projects within your discipline. This can lead to beneficial opportunities to collegially support and encourage one another. Indeed, interacting on a regular basis with students experiencing similar sets of problems may deepen the understanding of all those involved (Cacioppo & Hawley, 2009), as well as provide problem-solving assistance by focussing “similar efforts” on tasks (Ali & Kohun, 2007, p. 43; Thoits, 1986)

Supervisors are also usually well-connected in terms of what may be happening within their respective departments. For example, scheduled symposiums, research presentations, mentoring programs, student research groups, and confirmation of candidature proposals each have the potential to create opportunities for conversations with peers and academics alike, further linking you into the research culture within your university. Some professional organisations and societies also offer mentoring programs as a way to support networking and collaboration within disciplines. It is not necessary for mentors to be in close physical proximity, as communication via email and phone are usually valid options. Additionally, supervisors are often members of professional organisations, meaning that they can provide information about student internships, summer schools, conferences, and other

potential opportunities for networking. Whether you are studying on-campus or externally, the value of participating in such events either in person or via computer-mediated methods should not be underestimated. Maintaining regular communication with your faculty and discipline is of high importance to reduce the potential manifestation of social isolation, and other factors leading to doctoral student attrition (see Ali & Kohun, 2006, 2007).

### *New and existing social networks*

*“Knowledge construction is relational and dynamic, and learning is founded in relationships between and among people”* (Beutel et al., 2010, p. 69).

It is recognised that most, if not all, students go into the doctoral program with a pre-existing group of supportive family and/or friends. Fellow students from undergraduate courses may also form part of this network of social support. However, it is important to realise that studying at PhD level is very different to other university courses, in that it involves “major changes, even paradigm shifts, to how students think” (Beutel et al., 2010, p. 76; Ali & Kohn, 2007). Being a significant learning experience over an extended period of time, it makes intuitive sense to increase your existing social networks and establish friendships with those undertaking the same journey. Psychologically, befriending fellow doctoral students is likely to be rewarding on many different levels. In terms of practicality, having multiple social ties provides access to a diverse range of information (Cacioppo & Hawkley, 2009). While in the process of completing a PhD, the value of multiple sources of information makes common sense.

### **Conclusion**

This chapter has highlighted the protective benefits associated with social support, as well as examined the empirical findings on the negative effects of social isolation during the doctoral journey. Both authors have critically reflected on their own perceptions and experiences of social support and social isolation while studying as on-campus and off-

campus doctoral students. Finally, strategies that were found to increase social support networks for each of the authors were also provided. Overall, the doctoral journey can be a challenging but rewarding experience. While it is true that studying a PhD often involves multiple problems and stressors, these potential pitfalls can be successfully negotiated with the support of like-minded peers and regular communication with supervisors and university administrators. Traversing the doctorate can be made easier with suitable companions with which to share the experience. Indeed, the role of social support is paramount to the successful completion of the PhD journey, for those without these valuable travelling companions are more susceptible to doctoral student attrition, as well as compromised psychological and physical health.

## References

- Ali, A., & Kohun, F. (2006). Dealing with isolation feelings in IS doctoral programs. *International Journal of Doctoral Studies*, 1(1), 21–33. Retrieved from <http://dx.doi.org.ezproxy.usq.edu.au/10.1037/0278-6133.12.1.56>
- Ali, A., & Kohun, F. (2007). Dealing with social isolation to minimize doctoral attrition: A four stage framework. *International Journal of Doctoral Studies*, 2(1), 33–49. Retrieved from <http://ijds.org/Volume2/IJDSv2p033-049Ali28.pdf>
- Baruch-Feldman, C., Brondolo, E., Ben-Dayana, D., & Schwartz, J. (2002). Sources of social support and burnout, job satisfaction, and productivity. *Journal of Occupational Health Psychology*, 7(1), 84. Retrieved from <http://dx.doi.org/10.1037/1076-8998.7.1.84>
- Baumeister, R. F., & Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), 497–529. Retrieved from <http://dx.doi.org/10.1037/0033-2909.117.3.497>
- Berkman, L. F. (1995). The role of social relations in health promotion. *Psychosomatic Medicine*, 57(3), 245–254. Retrieved from [http://journals.lww.com/psychosomaticmedicine/Abstract/1995/05000/The\\_Role\\_of\\_Social\\_Relations\\_in\\_Health\\_Promotion.6.aspx](http://journals.lww.com/psychosomaticmedicine/Abstract/1995/05000/The_Role_of_Social_Relations_in_Health_Promotion.6.aspx)
- Berg, S., Mellstrom, D., Perrson, G., & Svanborg, A. (1981). Loneliness in the Swedish aged. *Journal of Gerontology*, 36(3), 342–349. Retrieved from <http://geronj.oxfordjournals.org/content/36/3/342.short>
- Beutel, D., Gray, L., Beames, S., Klenowski, V., Ehrich, L., & Kapitzke, C. (2010). An exploratory study of online social networking within a Doctorate of Education program. *The International Journal of Learning*, 17, 67–79

Bolton, G. (2010). *Reflective practice: Writing and professional development*. London: SAGE Publications Ltd.

Cacioppo, J. T., & Hawkley, L. C. (2003). Social isolation and health, with an emphasis on underlying mechanisms. *Perspectives in Biology and Medicine*, 46(3), S39–S52. doi:10.1353/pbm.2003.0063

Cacioppo, J. T., & Hawkley, L. C. (2009). Perceived social isolation and cognition. *Trends in Cognitive Sciences*, 13(10), 447–454. doi:10.1016/j.tics.2009.06.005

Cahir, N., & Morris, R. D. (1991). The psychology student stress questionnaire. *Journal of Clinical Psychology*, 47(3), 414–417. doi:10.1002/1097-4679(199105)47:3<414::AID-JCLP2270470314>3.0.CO;2-M

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98(2), 310. Retrieved from <http://dx.doi.org/10.1037/0033-2909.98.2.310>

Committee on the College Student, Group for the Advancement of Psychiatry. (2000). *Helping students adapt to graduate school: Making the grade*. New York, NY: Routledge.

Fisher, K. (2006). Peer support groups. In C. Denham & T. Evans (Eds.). *Doctorates Downunder: Keys to successful Doctoral study in Australian and New Zealand*. Retrieved from <http://search.informit.com.au/fullText;dn=615036522503831;res=IELHSS>

Goplerud, E. N. (1980). Social support and stress during the first year of graduate school. *Professional Psychology*, 11(2), 283. Retrieved from <http://dx.doi.org/10.1037/0735-7028.11.2.283>

Heaney, C. A., & Israel, B. A. (2008). Social networks and social support. In K. Glanz, B. K. Rimer., & K. Viswanath (Eds.). *Health behavior and health education: Theory,*

- research, and practice* (pp. 189–210). San Francisco: John Wiley & Sons.
- Hefner, J., & Eisenberg, D. (2009). Social support and mental health among collect students. *The American Journal of Orthopsychiatry*, 79, 491–499. doi:10.1037/a0016918
- Hodgson, C. S., & Simoni, J. M. (1995). Graduate student academic and psychological functioning. *Journal of College Student Development*, 36(3), 244–253. Retrieved from <http://psycnet.apa.org/psycinfo/1996-90736-001>
- Holt-Lunstad, J., Smith, T. B., Baker, M., Harris, T., & Stephenson, D. (2015). Loneliness and social isolation as risk factors for mortality: A meta-analytic review. *Perspectives on Psychological Science*, 10(2), 227–237. doi:10.1177/1745691614568352
- Hortulanus, R., & Machielse, A. (2006). The issue of social isolation. In R. Hortulanus, A. Machielse., & L. Meeuwesen (Eds.). *Social isolation in modern society* (pp. 3–12). New York: Routledge.
- Jairam, D., & Kahl, D. H. (2012). Navigating the doctoral experience: The role of social support in successful degree completion. *International Journal of Doctoral Studies*, 7, 311–329. Retrieved from <http://ijds.org/Volume7/IJDSv7p311-329Jairam0369.pdf>
- Janta, H., Lugosi, P., & Brown, L. (2014). Coping with loneliness: A netnographic study of doctoral students. *Journal of Further and Higher Education*, 38(4), 553–571. doi:10.1080/0309877X.2012.726972
- Kawachi, I., & Berkman, L. F. (2001). Social ties and mental health. *Journal of Urban Health*, 78(3), 458–467. doi:10.1093/jurban/78.3.458
- King, K. B., Reis, H. T., Porter, L. A., & Norsen, L. H. (1993). Social support and long-term recovery from coronary artery surgery: Effects on patients and spouses. *Health Psychology*, 12, 56–63. doi: <http://dx.doi.org.ezproxy.usq.edu.au/10.1037/0278-6133.12.1.56>
- Kulik, J. A., & Mahler, H. I. (1989). Social support and recovery from surgery. *Health*

*Psychology*, 8(2), 221–238. Retrieved from <http://dx.doi.org/10.1037/>

0278-6133.8.2.221

Langford, C. P. H., Bowsher, J., Maloney, J. P., & Lillis, P. P. (1997). Social support: A conceptual analysis. *Journal of Advanced Nursing*, 25(1), 95–100. doi:10.1046/j.1365-2648.1997.1997025095.x

Leary, M. R., & Baumeister, R. F. (2000). The nature and function of self-esteem: Sociometer theory. *Advances in Experimental Social Psychology*, 32, 1–57. doi:10.1016/S0065-2601(00)80003-9

Machielse, A. (2006). Theories on social contacts and social isolation. In R. Hortulanus, A. Machielse., & L. Meeuwesen (Eds.). *Social isolation in modern society* (pp. 13–36). New York: Routledge.

Meeuwesen, L. (2006). A typology of social contacts. In R. Hortulanus, A. Machielse., & L. Meeuwesen (Eds.). *Social isolation in modern society* (pp. 37-60). New York: Routledge.

Reblin, M., & Uchino, B. N. (2008). Social and emotional support and its implication for health. *Current Opinion in Psychiatry*, 21(2), 201. doi:10.1097/YCO.0b013e3282f3ad89

Ross, S. E., Niebling, B. C., & Heckert, T. M. (1999). Sources of stress among college students. *Social Psychology*, 61(5), 841–846. Retrieved from <http://www.rose-hulman.edu/StudentAffairs/ra/files/CLSK/PDF/Section%20Two%20Instructor%20Resources/Sources%20of%20Stress%20Among%20College%20Students.pdf>

The Graduate Assembly. (2014). *Graduate student happiness and well-being report*.

Tinto, V. (1993). *Leaving college: Rethinking the causes and cures of student attrition* (2nd ed.). Chicago: The University of Chicago Press.

Thoits, P. A. (1986). Social support as coping assistance. *Journal of Consulting and Clinical*

*Psychology*, 54(4), 416. doi:10.1037/0022-006X.54.4.416

Tomaka, J., Thompson, S., & Palacios, R. (2006). The relation of social isolation, loneliness, and social support to disease outcomes among the elderly. *Journal of Aging and Health*, 18(3), 359–384. doi:10.1177/0898264305280993 .

Uchino, B. N. (2006). Social support and health: A review of physiological processes potentially underlying links to disease outcomes. *Journal of Behavioral Medicine*, 29(4), 377–387. doi:10.1007/s10865-006-9056-5

Viswesvaran, C., Sanchez, J. I., & Fisher, J. (1999). The role of social support in the process of work stress: A meta-analysis. *Journal of Vocational Behavior*, 54(2), 314–334. doi:10.1006/jvbe.1998.1661

Walton, G. M., & Cohen, G. L. (2007). A question of belonging: Race, social fit, and achievement. *Journal of Personality and Social Psychology*, 92(1), 82. Retrieved from <http://dx.doi.org/10.1037/0022-3514.92.1.82>

Zaza, C., & Baine, N. (2002). Cancer pain and psychosocial factors: A critical review of the literature. *Journal of Pain and Symptom Management*, 24(5), 526–542. doi:10.1016/S0885-3924(02)00497-9

Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment*, 52(1), 30–41. doi:10.1207/s15327752jpa5201\_2