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Interview with Current Graduate Students

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Q. Why did you decide to go to graduate school? Why that particular graduate school? Why that particular degree? How did you choose?

Layton: Getting a PhD in epidemiology was not my top choice until well through undergrad. In fact, I didn't even know what epidemiology was until the end of my sophomore year. I had planned on going to medical school for years, but once I began my undergrad work, I realized that there were multiple opportunities in research that I hadn't even considered. I chose getting a PhD in epidemiology and public health because I felt it was a great balance of medical science mingled with behavioral and social considerations. It seemed to fit my interests in medicine and research with a population perspective.

When researching graduate schools, I wanted something that was well-ranked and respected academically, would have reliable funding sources...and was in a good LDS environment. I visited schools to get a feeling of the area and people involved (you can't get it all from a website). In the end, I chose the University of North Carolina at Chapel Hill. I visited and loved the area—a highly edu-

cated area surrounded by universities [and] computer and biotech companies. The Church was strong and thriving with large wards, a temple nearby, and many other grad students and young professionals like me attending the singles and family wards. The university and department [were] welcoming and had a warm, collaborative feel—unlike the “degree factory” vibe I got from some other schools. A unique feature of UNC was that...they would accept [me] to the PhD program and let me earn a master's [degree] on the way. This was the deciding factor for me, as it meant I wouldn't have to pay for a master's degree (which are typically unfunded), then go through another round of applications after two years.

Shwalb: It was required for my career field. In order to become a licensed psychologist, you need a PhD or a PsyD. I [chose] the University of Missouri because the counseling psych program there has consistently been ranked among the top five programs in the country for the past 50 years. Also, MU places a huge emphasis on cross/multi-cultural competency, which is something I value as a therapist and as a person. Counseling psychology offers a nice blend of training in clinical [work], research, and teaching. With this degree, I can do pretty much anything a clinical psychologist can do, except my training has placed a huge emphasis on multiculturalism—something I know clinical psychology values, but not to the same extent, I believe, as counseling psychology. To understand this, all you have to do is compare a counseling psych and [a] clinical psych journal.

Hickman: I went to graduate school at the University of Chicago in the Department of Comparative Human Development (where I will finish my PhD this year). I chose this particular program and this particular institution...because of its strong interdisciplinary focus and the strong interdisciplinary tradition and intense intellectual atmosphere at the University of Chicago. More particularly, the Department of Comparative Human Development focuses on several interdisciplinary fields,

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including cultural psychology and psychological anthropology. I had majored in psychology and anthropology as an undergraduate at BYU, and I was looking for a program where multiple methods and theoretical approaches can be pursued unfettered. In this department, and at the University of Chicago more broadly, I found a place where disciplinary commitments take a backseat to “interesting questions.” Finally, I decided to go to Chicago... to work with my advisor, Richard Shweder. He has pioneered important lines of research in cultural psychology and psychological anthropology, and I have thoroughly benefited from his mentorship throughout my graduate career.

Birmingham: I wanted to teach; I love to teach. But I didn't want to teach elementary school or high school. I love little kids in elementary school. I love them, but I wanted to teach older kids. But I didn't want to teach high school because I wanted to teach people who wanted to be taught. And so I just wanted to teach at the university level, and to do that, I have to have a PhD. But somewhere along the line, somewhere in that whole process, I found out I really love research too, which I didn't know going in. And then one day I thought “this is really awesome too, and I love doing it.” So I wanted the PhD originally so I could teach. Now I want it so I can teach and do research. I went to the University of Utah, and that's where I got my Master's and my PhD. The [PhD] program is social health psychology, so social psychology with an emphasis on health, and...specifically what I look at is social relationships and how those relationships can affect us physiologically. So, specifically I look at cardiovascular health...different types of relationships, the quality of those different types of relationships, whether they're positive relationships or negative relationships or a mixture of both positive and negative, and how those types of relationships affect cardiovascular functioning and cardiovascular disease risk.

Q. What are some differences and similarities between academic life as a BYU undergraduate student and a graduate student?

Layton: As I was finishing my undergrad, I told the psychology professor with whom I did research that I was excited for grad school because it “wouldn't have all the hoops to jump through like undergrad.” She laughed, and responded, “Grad school still has hoops to jump

through—they're just higher, and smaller, and on fire.” She knew what she was talking about.

Graduate programs, particularly doctoral programs, have long lists of very specific requirements—practicum experiences, required core classes, deadlines, qualifying exams, teaching requirements, presentations, publishing requirements, etc.—and you are responsible yourself for making sure they get met. You are a lot more independent in grad school, and while almost any program has a set of core requirements, you can tailor most of your graduate experience to fit your research interests. Your department or adviser won't tell you all the classes you should take, what you should research, what seminars you need to be attending, what journal articles you should have read, etc. You figure those things all out by yourself with guidance and help from others, but ultimately it's up to you to decide what direction you take your career in.

Shwalb: Life is much different as a graduate student. There is much more independence regarding research, assistantships, and externships. However, I find I am still as busy with classes, and now I have the added pressure of teaching, doing independent research, and seeing clients on top of my normal load of classes. As a PhD student in psychology, I feel like I am a full-time employee and a full-time student. Being at a public school is also very different from being at BYU. Pros and cons, of course, but I miss BYU a lot!

Hickman: Academic life in graduate school is much more driven by your individual research interests. There is a lot more flexibility in the types of courses you can take, and you have to take more initiative to seek out relevant seminars anywhere on campus (at least in my experience). In this sense, graduate study is much more learner-driven. I would certainly say that the workload in graduate school exceeded that of my busiest undergraduate semesters. Part of the issue here is that [your] research is always looming in the background, and coursework and everything else you do in graduate school really is focused on helping you do better research and eventually complete a quality dissertation. Student and faculty relationships are qualitatively different as well. Rather than simply having a student-professor relationship, faculty tend to see graduate students as incipient colleagues. I very much value the personal relationships that I have with the faculty in my department.

Birmingham: I was an undergraduate [at BYU]. I felt... that much of the work that I was doing as a graduate student was [what] I had already done here...as an undergraduate. The undergraduate program here was such a great program...It gave me so many opportunities to do things that when I ended up in graduate school, there [were] a lot of things that I was like "oh, and I've already done that," "oh, and I know how to do that and I know how to do that" because I had been so well-prepared by BYU as an undergraduate. So I did find that [at] the University of Utah, as a graduate student...it was an easier switch in roles because I had been well prepared. It's always scary to go in, and there were times that I sat in meetings going "oh, I have no idea what they're talking about." And I think that's anybody...that starts a new program.

But I felt well prepared...There were many graduate students that had never run an experiment when they came into graduate school. And I had, because...Dr. Holt-Lunstad gave me the opportunity to run one of her studies...So there were a lot of things that the other students were saying: "oh, I haven't done that," or "oh, you have more posters than I do," or "oh, you've had more opportunities to do conferences." And I felt like I had already had the opportunity to do that. There's a lot of stuff you have to do as a graduate. There was a lot more studying; there was a lot more reading. I feel like I've read the entire library and still haven't read enough. There's always a lot more reading, and there's a lot more participation in the lab work. You're responsible for whether that stuff gets done correctly more than you are as an undergraduate.

Q. What advice do you have for undergraduates?

Layton: It may seem obvious, but I think undergrads who are contemplating graduate school need to understand what graduate students do, and what you actually do with a graduate degree. I worked as a research assistant for Julianne Holt-Lunstad and Tim Smith, professors in psychology and counseling psychology, respectively, while at BYU, and part of my responsibilities involved reading and summarizing hundreds of research articles. That experience taught me exactly what PhD-level research was about because I had read these articles by researchers all around the world in several different disciplines. I have also known a few students who end up in grad school without really understanding what grad school is about—

they just see it as the next step. They find out the hard way.

On a lighter note, I would advise all students, undergraduate or graduate, to keep some sort of outlet throughout [their] career. Grad school especially can be pretty consuming of your life, energy, and free time. I sang in choir my entire time at BYU, and after moving to North Carolina, I continued singing in some form or another (e.g., community, church, and professional choirs). Some semesters I have been busier than others and have had to cut back a bit, but having some aspect of my life that was not just more school is very important to me. It's very easy for me to bring work/school home with me, and there are times I just need to get away from it for a little bit. And one more thing. Take more statistics classes. No matter what you're doing research in, you need statistics. Lots of them.

Shwalb: If you want to go to graduate school, get a good broad general education as an undergraduate. Become a good reader and writer. So much of your success in graduate school depends on your ability to effectively communicate. Also, get as much experience in research as you can, at every level (e.g., conceptualization, study design, data collection, analysis, writing).

Hickman: If graduate school is on your radar, then the number one recommendation that I can offer is to get involved in research as early as you can. Establish relationships with faculty and think about what type of work you would want to do in graduate school, and let this guide your involvement in research as an undergraduate. Doing this will also help you get to know your subfield more intimately, such as key theorists, styles of argument, etc. It is also quite useful to attend the professional conferences, present your research, and network with people that you could possibly work with in graduate school. These personal connections go a long way in helping you get a spot in your ideal graduate program.

Q. Do you have any interesting experiences from graduate school to share?

Layton: I have felt like a student-in-training my entire time in graduate school until just recently. I went to a medical conference and listened to several people give presentations about various topics, and was happy to see

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someone give a presentation on a topic closely related to my dissertation. I noticed a few things in the presentation that suggested the researchers had made some common mistakes in this particular type of analysis, but I was quite confident that they would very quickly be pointed out by others in the question/answer session following the presentation. However, I soon realized that no one was going to say anything and likely no one else may have recognized that there may be a rather serious problem. Then it struck me that in this large presentation hall full of physicians and researchers, I was likely the only one who had studied this particular issue in great depth. Even still as a “student,” I had a valuable voice and expertise to add to this larger research community. I made my comments, asked a question, and for a brief moment, felt like a bit of an authority. After that I kept working on my dissertation proposal, and the feeling faded somewhat, but it was a great moment nonetheless.

Shwalb: I’ve had lots of interesting experiences from graduate school. I’m in the military and was deployed to Iraq in the middle of my PhD program. I’ve also had 3 babies while in grad school, which is definitely not the norm outside of BYU. Being a Latter-day Saint in grad school has itself been an interesting experience. I often find myself needing to defend and explain Church teachings that I previously took for granted as being the social norm. My testimony and being a family man throughout grad school has made me ever more grateful for the blessing it is and the eternal perspective one gains through Church membership.

Hickman: My most enjoyable year in graduate school was conducting fieldwork in Thailand. I spent a year in a Hmong village, interviewing, surveying, and conducting participant observation. The latter entailed farming with families from my village, attending rituals and religious events, and otherwise striving to get a in-depth sense of daily life for Hmong people in this community. This was a period of intense data collection, but the relationships that I established in my research and the variety of incredible experiences made it the most enjoyable aspect of my graduate student experience.

Q. What is life like in the day of a graduate student?

Layton: Every single morning, I wake up and debate if I’m going to work from home that day or go to my

cubicle at the university....Ultimately I concede that I will get more done if I actually go to school, so I drive off to school. The schedule of most days is up to me. Each week, I have a few seminars that I go to; I [listen] to presentations by other students or visiting researchers about their work. I also have a journal club that I go to weekly where we discuss recent new studies [that] have been published....I have pretty regular meetings with my dissertation advisor...and other members of my doctoral committee to update them on the progress I’m making or ask for help and advice on pieces where I’m stuck. Occasionally I’ll sit in on courses I took a few years ago when I realize that I’m a little shaky on a concept that I really should know better than I do. I spend most of my other time reading through literature relevant to my field, piecing together portions of my dissertation proposal, grading papers for the class I TA, or wasting time, which unfortunately happens a little too often. In the evening, work usually comes home with me. Fitting in social time, church activities, institute classes, and downtime is important to me, so I make sure those happen, too.

Shwalb: I get up every day at 6 a.m. and go to the gym. I work out for an hour and then head over to my office at the university counseling center. I see clients for 60-minute sessions throughout the week. On Thursdays, I provide supervision to a master’s-level student in an entry-level practicum site. On Tuesdays I go to my advanced classes. I meet with my doctoral advisor as needed to work on my dissertation. I also have a weekly meeting with a research team, led by another faculty member. I don’t work on Sundays and rarely need to work anymore on Saturdays. I try my best to be home every day by 6 p.m. I need to be much more efficient with my time than most of the other students in my program because I have a family of my own and because of my Church callings. Grad school isn’t easy, but it can be very rewarding at times.

Hickman: As an advanced graduate student, a typical day consists of balancing the various demands of dissertation writing, job applications, and, for some, teaching responsibilities (to make money!). This can get complicated at times, as some activities take priority over others (whether you mean to let them or not). Some days are exclusively devoted to one task or another, but the trick is to not let the dissertation take a backseat, but also not to shortchange yourself in teaching opportunities and the

networking and research involved in applying for tenure-track jobs. I find myself making up a lot of time late at night, when there are fewer distractions.

Birmingham: Research is the most important thing. At least in my program, it was research. And you have to do the teaching, and you have to do the TAing, kind of to pay the bills... Research is the main thing, and reading the journal articles and really getting up to speed on whatever your chosen area is—really getting up to speed on the literature in that. It's not a huge percentage...but it does take up time.

The Rise of Single-Child Families: Psychologically Harming the Child?

Chandler Krynen

ABSTRACT *The number of single-child families continues to increase yearly due to financial burdens, social contexts, and even governmental restraints (Wong, 2005). While having only one child might be easier financially (Griffin, 2002), what are the psychological costs of single-child families in relation to an only-child? This literature review explains how despite only-children typically being more creative and intellectual, many problems surface due to having no siblings. It is generally found that only-children lack social and emotional ability because of not having siblings with which to interact. Only-children also tend to experience increased parental pressure. These problems typically last throughout an only-child's lifespan. Ultimately, current research seems to indicate that the disadvantages of single-child families overwhelm the advantages.*

Although one-child families are commonplace in culture and society, conclusions on psychological implications are, and continue to be, a subject of wide debate within academic circles. The debate began among scholars, and rapidly progressed when China's radical one-child policy set the standard for single-child families in 1979, when Deng Xiaoping, the ruler of China at the time, saw China's overpopulation as a hindrance to economic development (Wong, 2005). Following China's unique demonstration, U.S.-based groups, such as Negative Growth Population (NPG) and Population Connection, have encouraged single-child families as a means of population control for the same economic reasons. Even without such efforts, the family size in the U.S. today is decreasing (Centers for Disease Control and Prevention [CDC] 2010; see Fig. 1).

Several factors are contributing to this decline, though a major factor is yet to be found. The current research points to financial disadvantages being the most likely cause. However, it is also in vogue for couples to marry and begin families at a later age, which also may cause

single-child families to become more prevalent (Griffin, 2002).

There are now two prominent sides to the debate of the psychological impact of only-children families. On one hand, some scholars have demonstrated that only-children have been brought up in a more effective manner; they have *all* of their parents' care because there are no other siblings with which to compete, leading them to become more productive individuals (Falbo & Polston, 1993). On the other hand, some scholars have found that only-children are missing the valuable opportunity to interact with siblings, and as a result endure a poorer quality of living that severely affects them as they age (Richardson, 2006). The objective of this paper is to create a more conclusive argument about which one of these sides is correct. To the author's knowledge, a holistic study of the current research on single-child families has yet to be undertaken. In order to assess the psychological impact of single-child families on only-children, this paper will address the following: first, an only-child's intellectual and creative capabilities; second, the stress encountered from parents; third, the child's social inabilities with others; and finally, the tendency for only-children to internalize problems.

The Benefits of an Only-child

"Biologically speaking, life's purpose is not happiness but survival and reproduction" (Myers, 2006, p. 659). In order to ensure survival and reproduction, it is desirable to be intelligent and motivated. Consequently, only-children would better suit this goal of life; their intelligence and motivation achievement scores are consistently higher than their multiple-sibling counterparts (Falbo & Polston, 1993). Additionally, it has been found that only-children complete more years of education and obtain more prestige than children with siblings do (Mancillas, 2006).

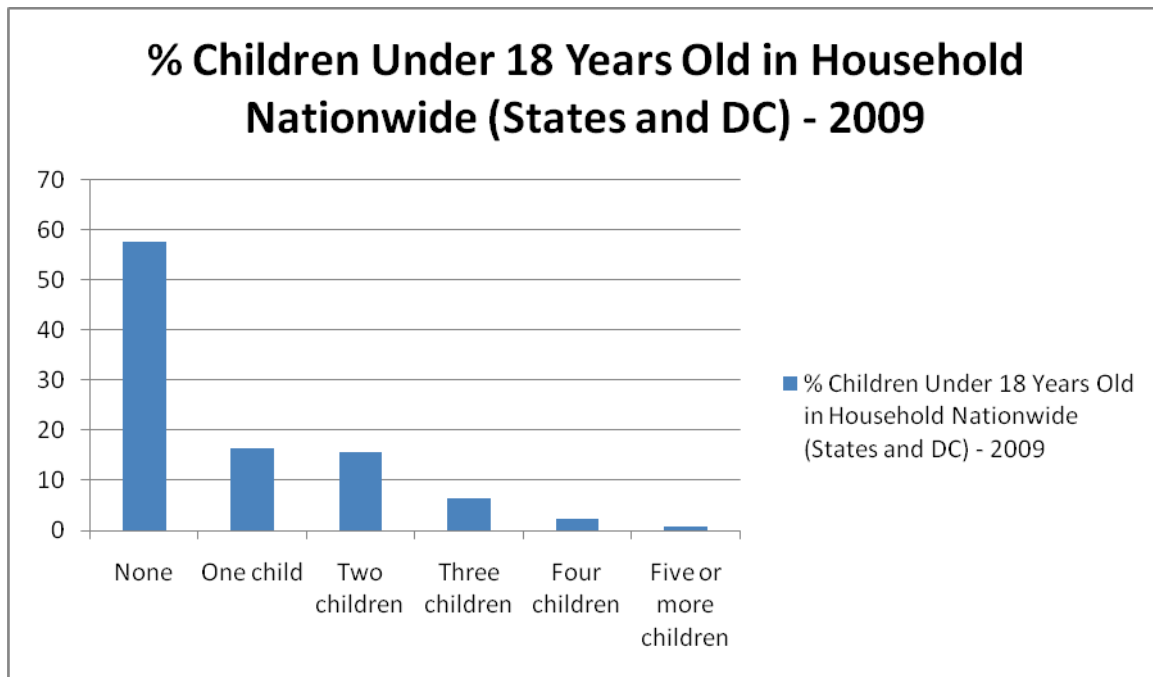


Fig. 1 Current family proportions in the U.S. Source: Centers for Disease Control and Prevention (2009).

According to a 26-item questionnaire presented to 20 first- and second- grade teachers, Lavin (2001) found that 68% of the teachers thought only-children students to be bright, articulate, and motivated to do well. This may be because of strong parental involvement with only-children's affairs—there is no struggle of allocating attention to siblings, so it all goes to the single child (Lavin, 2001).

Generally, creativity has great opportunity to abound in single children. “Because only-children inevitably spend time alone, many have developed a strong creative muscle, inventing imaginary friends, siblings, landscapes or adventures” (Richardson, 2006, p. 1). In fact, as adults, only-children report having enjoyed the time spent alone in order to strengthen creativity (Mancillas, 2006).

But is life just creativity and intellect? According to editor Marian Sandmaier of *The Psychotherapy Networker* magazine, “A sibling may be the sole keeper of one's core identity, the only person with the keys to one's unfettered, more fundamental self” (1994, p. 11). To this end, intellect and creativity might not mean much to an only-child if he or she also has to deal with the increased pressure of parents due to absence of siblings.

Factors Leading to an Only-child's Stressful Life

Parental Focus

Multiple studies have documented how parents' stressors can be placed onto their only-child because the role of the parent is magnified, consequently creating extensive amounts of stress (Lavin, 2001). In a two-parent family, any interaction a child can have within his or her family will involve an adult component. Moreover, any interaction the child wishes to observe will be exclusively between adults within his or her family. This creates the issue of having to cope with a solely adult perspective on the world. Children growing up with siblings will typically not encounter this scenario because they do not have to depend on their parents so heavily for support. Furthermore, for only-children, expressing powerful feelings of love, hate, or anger can only be done in the family with an adult. According to Lavin (2001), it becomes difficult for only-children to express their deepest feelings and, consequently, they usually repress their feelings in order to conciliate with the parent. Lisen Roberts, a professor of human environment at the University of Western Carolina, and Priscilla Blanton, a professor of child and family studies at the University of Tennessee, illustrated this concept with an experience shared by an only child:

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I didn't have somebody to sit on the bed late at night and talk to. I had to learn to kind of sort things out myself. There's a lot of things that kids can't relate to parents; you know, a kid needs to talk to a kid. And there's some things brothers and sisters talk about that you don't feel comfortable talking about with your friends. I didn't have that. I had to deal with all those things myself. (2001, p. 5)

Becoming Independent of Parents

Single-child parents typically have much more control over their child's agenda; therefore, only-children often have to be more aggressive in establishing their own agenda. Unfortunately, exploring and discovering their own agenda poses the threat of damaging their relationship with their parents, leaving the only-children with nobody else in the family in whom they can find support. Because there is no sibling to avert the attention while they "rebel," most only-children never completely separate from their parents, as found in a study by Richardson (2006). Many only-children adults still feel their parents' influence on them into their forties and beyond. Moreover, most only-children see themselves as an extension of their parents' hopes and fears, never realizing the potential to break free. This parental pressure is felt much more by only-children than by those with siblings. When many only-children try to live outside of themselves, they often experience self-hatred and feel that they have no right to have their own identity (Richardson, 2006).

The Lack of Siblings

Being devoid of siblings, many only-children have fewer opportunities to develop advantageous relationship skills, according to Richardson (2006). In a family with at least two children, the older child has to deal with the younger child destroying the protective barriers that have already been put into place, such as parental attention which is no longer exclusive to the only-child. Conversely, the younger child has to deal with the terror of being "overpowered" by the older child. Only-children do not have to worry about their parental bond being disrupted by another, which would have forced them to find ways of getting through the dislocation. In addition, only-children do not have to meet the challenge of a sibling already present, which may have forced them to find ways to vanquish established threats. Indeed, those with siblings have no choice but to find a way to work conflicts out with each other: They will always be brothers or sisters. Only-children often choose to walk away from social conflicts, subsequently gaining little understanding of how to effectively deal with a similar scenario in the future (Richardson, 2006). This concept is

known as "rough and tumble" learning relationship skills (Pitkeathley & Emerson, 2004; Smith, 2009), because one is forced to work around the consequences of his or her decisions within a familial relationship.

A recent study was performed in 2010 by Walker and colleagues in which 478 families completed a questionnaire assessing the family's functioning. This study found that siblings also promote positive outcomes such as increased empathy, kindness, and generosity due to having a relationship with family members of one's own age, instead of a "vertical" relationship with parents. This study seems to indicate that having a sibling, specifically a sister, can help children avoid depression and likely lead better lives.

Moreover, a life with multiple siblings enables children to try out a multiplicity of roles. It sets them up to effectively address larger groups and in time, the world. To be able to win, lose, compromise, vie for dominion, compete with parents' attention, and overall pull through the experience are things that an only-child is less likely to have available (Richardson, 2006).

Another possible problem of not having experience with siblings involves classroom interaction. Two studies have found that classmates of only-children usually liked only-children less as a group. The first performed by Kitzmann and colleagues in 2002 involved peer-ratings of 139 only-children in elementary school. Kitzmann found that only-children were more likely to be victimized and aggressive in the group, which suggests that having a sibling would be helpful in coping with conflict. This study echoes the results of a similar study performed by Downey and Condon (2004).

As adults, only-children often express the desire to have siblings, specifically a brother who could have led them through their adolescent years. According to Roberts and Blanton (2001), some only-children have said one of the first things they started to have major problems with was social interaction. When beginning middle school, they wished to ask questions of their "fantasy" older sibling about how to interact with others, instead of using the trial-and-error method. Roberts and Blanton (2001) also found that some only-children have even developed lifelong wishes of having a sibling, believing that friends do not necessarily know what it is like to live in their home and are unable to provide adequate social support.

Other Stressors

Another prominent difficulty of only-children is their capacious accountability for their achievements and failures; as a result, they feel heavily stressed and are unable to cope with challenges (Zuber, 1982). In

the same research, it was found that only-children were more likely to attribute their chances of passing an exam to their own abilities and skills rather than to situational factors. A more recent study of 724 only-children and 806 children with siblings found that only-children were more likely to have an internalization of problems (Tao, 1996). This internalization usually leads to depression; when one attributes receiving poor grades, being socially rejected, and issues in one's career as unavoidable and one's own fault, as only-children often do, he or she is more likely to be depressed (Li, 2002; Myers, 2006). Furthermore, as adults, only-children typically have lower quality friendships and their overall life satisfaction rating is poorer than adults with siblings (Hill, 1995).

Conclusion & Coping with the Future

As only-children become adults, they express anxiety over parenting. This is often because only-children are responsible for perpetuating their own family lines—which is the only way their parents can have grandchildren—and the stress to do so remains substantial. A balancing act of dividing attention appropriately among more than one child, if they choose to have several children, then becomes another stressor of only-children parents, as they do not have the memory of parents who *did* have to divide attention among siblings (Greenberg, 1998).

When only-children are older, they frequently have the stress and pressure of caring for their parents, which encompasses emotional, financial, and physical demands. A study in China (Fong, 2002) found that for only-children having to support families, “Only an elite job [could] supply enough income to enable one person to support so many dependents” (p. 1424). This study found that this stress also applies to only-children outside of China. Fong highlights how the modern forces of single-child families are both a cause and an effect of the unrealistically high expectations often said to be put upon modern youth worldwide (Fong, 2002). In effect, only-children often feel immense pressure to succeed, seek undivided attention from others, experience problems with connecting and negotiating with peers, and worry about later life issues such as parental care giving and death of parents (Roberts & Blanton, 2001). In one study, the issue of caring for their parents (Duetsch, 2006) guided most only-children to have strong desires to remain in the same city for the rest of their lives. Many feel responsible for the happiness of their parents, including specific

aspirations such as paying off the family debt. In the same study, participants with siblings did not have the same goals concerning their parents. While most still had a deep love for their parents, children with siblings did not express the same degree of anxiety about providing for their parents later in life. Others have expressed anxiety over potentially losing their parents and lack of anybody to connect with concerning their family experience and history of childhood, which could create a lack of lifespan continuity.

Although intellect and creativity prosper, only-children can suffer from a lower quality of living overall from much stress. The high parental expectations typically impede an only-child's chance at breaking free and becoming truly independent, especially with lack of siblings to provide support; this leads to increased anxiety. Never fully emotionally separating from their parents, these children may suffer the entire burden of having to care for their parents when they grow older. All of these issues are compounded when the only-child feels responsible for his or her problems and consequently has to endure depression and even aggression. Ultimately, the current research suggests that the temporal savings of a single-child family are not worth the psychological costs.

References

- Centers for Disease Control and Prevention. (2007). Demographics. Retrieved July 3, 2010, from <http://apps.nccd.cdc.gov/brfss/display.asp?state=UB&cat=D&yr=2000&qkey=1613&grp=0&SUBMIT4=Go>
- Downey, F., Condron, R. (2004). Playing well with others in kindergarten: The benefit of siblings at home. *Journal of Marriage and Family*, 66, 333-350.
- Duetsch, F. (2006). Filial piety, patrilineality, and China's one child policy. *Journal of Family Issues*, 27, 366-389.
- Falbo, T., & Polston, D. (1993). The academic, personality, and physical outcomes of only children in China. *Child Development*, 64, 18-35.
- Fong, V. L. (2004). *Only hope: Coming of age under China's one-child policy*. Stanford: Stanford University Press.

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- Greenberg, A. (1998). When the only child becomes a parent. *Psychological Reports*, 83, 474.
- Griffin, T. L. (2002). The adult only child, birth order and marital satisfaction as measured by the Enrich Couple Inventory. *Dissertation Abstracts International*, 62 (10), 4837.
- Hill, S. A. Y. (1995). The square child in the round world: A look at the adult only child. *Dissertation Abstracts International*, 55 (7), 1828.
- Kemppainen, L., Jokelainen, J., Järvelin, M., Isohanni, M., & Räsänen, P. (2001). The one-child family and violent criminality: A 31-year follow-up study of the northern Finland 1966 birth cohort. *American Journal of Psychiatry*, 158, 960-962.
- Kitzmann, K. M., Cohen, R., & Lockwood, R. L. (2002). Are only children missing out? comparison of the peer-related social competence of only children and siblings. *Journal of Social and Personal Relationships*, 19, 299-316.
- Lavin, M. (2001). The golden child phenomenon. *Dissertation Abstracts International*, 62 (1), 77.
- Li, Q., Lan, X., He, Y., Jiang, Z., Tan, Z., & Li, X. (2002). A study on psychological intervention to improve the adaptability of the only-son recruits. *Chinese Journal of Clinical Psychology*, 10, 61-62.
- Mancillas, A. (2006). Challenging the stereotypes about only children: A review of the literature and implications for practice. *Journal of Counseling & Development*, 84, 268-275.
- Myers, D. (2006). *Psychology: Eighth edition in modules*. New York: Worth Publishers.
- Padilla-Walker, L. M., Harper, J. M., Jensen, A. C. (2010). Self-regulation as a mediator between sibling relationship quality and early adolescents' positive and negative outcomes. *Journal of Family Psychology*, 24), 419-428.
- Pitkeathley J, & Emerson, D. (2004). *Only child: How to survive being one*. London: Souvenir Press.
- Richardson, A. (2006). Only child—A unique inheritance. *Therapy Today*, 17, 36-39.
- Roberts, L. C., & Blanton, P. W. (2001). "I always knew mom and dad loved me best": Experiences of only children. *Journal of Individual Psychology*, 57, 125-140.
- Sandmaier, M. (1994). *Original kin*. New York: Dutton.
- Smith, P. (2009). *Children and play*. Oxford: Wiley-Blackwell.
- Tao, G., Qiu, J., Li, B., & Tseng, W. (1996). Comparison of behavior development between only children and children with siblings: A 6-yr follow-up study. *Chinese Mental Health Journal*, 10, 1-5.
- Wu, D., & Tang, J. (2002). Morality, personality, and temperament of single and nonsingle children aged 4-14 years. *Chinese Mental Health Journal*, 16, 454-456.
- Zuber, I. (1982). Possessing siblings and self-perception. *Polish Psychological Bulletin*, 13, 23-28.

Notetaking and Recall of Auditory and Visual Information: A Pilot Study

Meagen Jensen and Keith Lowell

ABSTRACT *Does notetaking affect performance on recall tests? Past research has generally found that notetaking improves performance, but all of these studies have focused on recall of auditory information. The current study was intended as a pilot study to examine the effect of notetaking method on both immediate and delayed recall, as well as both audio and visual recall. Eighteen undergraduate psychology students in the same psychology class at a major, private university watched a 5-minute video clip and then immediately completed a 29-question test. When tested 48 hours later, participants completed a similar 29-question test. Though no significant statistical results were found, notetakers performed consistently better than non-notetakers on both audio and visual recall. A larger sample size, yielding greater statistical power, and statistical test evaluation would improve the current study. A better understanding of how notetaking improves memory could assist the student in retaining information. The researchers recommend further study on the subject to see if the effects of notetaking on visual recall carry over to a larger sample size, or if the trends were a result of insufficient sampling.*

Notetaking and its effect on memory has been a topic of research for decades, probably because of its wide application and various uses (e.g., Einstein, Morris, & Smith, 1985; Ash & Carlton, 1953). Notetaking permeates many facets of people's lives, ranging from studying for a test to preparing a presentation (Piolat, Olive, & Kellogg, 2005). Because of the wide application of notetaking, there is value in knowing which methods are the most beneficial for memory (Larson, 2009). Piolat, Olive, and Kellogg (2005) state that different notetaking methods are appropriate in different situations. This is logical because different situations require a different focus. For instance, notetaking can be used for reading comprehension, for auditory memory in lectures, or for long-term information storage (Piolat et al., 2005). To assist in notetaking, individuals use various techniques and tools, including mnemonic devices, underlining

or highlighting textbooks, and covert rehearsal (Aiken, Thomas, & Shennum, 1975).

Although there are various types of notetaking, the current study focused on the effects of free-form, hand-written notes on memory. Many studies report on the relationship between notetaking and test performance in recall of audio material, such as lectures or word recitation (e.g., Di Vesta & Gray, 1972; Fisher & Harris, 1973). Di Vesta and Gray (1972) conducted a study of notetaking and recall of word lists read by the experimenter. Their results showed a slight relationship between notetaking and recall. Fisher and Harris (1973) found that students who took notes during a lecture and later review sessions had greater information recall than other groups and therefore performed better on immediate and delayed tests. Weiland and Kingsbury (2001) found that students who took notes while listening to a guest lecturer had better immediate and delayed recall. A meta-analysis of 57 studies found a positive, albeit modest, effect of notetaking on memory (Kobayashi, 2005). These studies and others confirm that notetaking increases recall of auditory information.

However, the authors found few studies which addressed the effects of notetaking on recall of visual material such as color, shape, or layout of objects in a video presentation. One study, conducted almost six decades ago, examined the value of notetaking while watching films (Ash & Carlton, 1953). The non-notetaking group performed the highest on recall tests. The study did not report whether the participants were tested on recall of visual information or auditory information. Additionally, these results may currently be unreliable due to subsequent advances in technology and time. Ash and Carlton's study was conducted in the '50s; their conclusions are likely applicable to people with similarly limited technological background. Their modern counterparts are familiar with the current constant barrage of visual media. One more accustomed to a visual presentation of information may

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process the information faster and better. More recently, Knight and McKelvie (1986) conducted an experiment that measured test performance among college students after viewing a videotaped lecture. They found that those who took notes performed better on delayed recall test performance than those who took no notes. Again, no distinction was made between recall of visual information and audio information. Therefore, these studies do not sufficiently indicate whether notetaking enhances visual recall. No other research could be found that lends to the discussion of notetaking and recall of visually presented information.

Despite its limited study, this subject is very timely. Our society is overloaded with information. New information is presented in varying formats, including both auditory and visual formats. Because of a lack of previous research, it is unknown whether notetaking improves recall on information presented visually. The process of notetaking requires individuals to select, interpret, and comprehend material, to pay attention to stimuli while engaging in a motor task, and to ignore distractions. Yet, in the case of visual recall, notetaking itself could present a distraction, because a notetaker must look away from the visual material to write notes. Hence, the current study, intended as a pilot study, hypothesized that notetaking would yield lower test results on recall of visual information, but that notetaking would yield better test results on recall of auditory information, as assessed by custom-made memory tests.

Method

Participants

The sample consisted of 18 psychology undergraduate students attending the same major, western private university and enrolled in the same psychology class. Participants were primarily in their junior year of school. Age ranged from 18 to 25 years old ($M = 21.2$, $SD = 1.86$). Participants were randomly assigned to one of two groups, notetaking or non-notetaking. All participants were right-handed except for two non-notetakers. All participants spoke English as their first language. Three notetakers usually typed their notes when taking notes in school; all other participants usually wrote their notes by hand. Table 1 describes further demographic information indicating no significant differences. Three students failed to specify whether they were in the experimental or control group; these students were excluded from the demographic analysis. It was assumed that all participants were in good health and were not suffering from any disorder that would significantly affect performance in the experiment.

Materials

Students completed two recall tests. Both tests were custom made. There were 58 questions with similar subject matter being divided between test forms. (The tests originally included 30 questions each, but one question per test form was later eliminated from analysis because the questions were not an accurate representation of material.) Test Form A, the immediate recall test,

Table 1: Demographic Information by Group

Group	n	Age ^a		Last night's sleep ^b		Stress level ^c	
		M	SD	M	SD	M	SD
Notes	7	21	2.2	5.9	2.2	3.6	1.9
No Notes	8	21.1	1.6	5.2	2.8	6.9	2.6
		$t = -1.33, p = 0.21$		$t = -0.30, p = 0.77$		$t = -1.39, p = 0.19$	

^a measured in years

^b measured in hours

^c measured by participants from 1-10, with 10 indicating completely at ease

Table 1. Demographic information divided by group, and statistical effect on results. *M* indicates the mean for each data point. *SD* indicates the standard deviation from the mean.

contained 19 visual questions and 10 audio questions. Test Form B, the 48-hour delayed recall test, contained 14 visual questions and 15 audio questions. An audio question asked about the content of words spoken by a narrator. A visual question asked about specific details of the presentation, such as color, number, or arrangement of items.

Procedure

Participants were recruited through concurrent enrollment in a psychology class. All participants sat at school desks in a classroom. Students were told about the study and signed an informed consent form. After agreeing to participation in the study, every other student was assigned to take notes on paper; the remaining students took no notes. Seating assignment was randomized so that distance from the screen would not affect test performance.

All participants were simultaneously shown the same five-minute movie clip about Egyptian history (National Geographic, 1998). Participants were told in advance about the immediate recall test but were not told about the delayed recall test. Eighteen participants completed a custom 29-item immediate recall questionnaire, which was then collected. Participants immediately completed a demographic questionnaire. Forty-eight hours later, 14 of the original 18 students completed a similar 29-item delayed recall questionnaire.

Statistical Design

This was a between-subjects two-group design assessing a directional hypothesis that notetakers would perform better than non-notetakers. Data were analyzed with two tailed t-tests in PASW Statistics (Version 18) on a Dell Windows Vista Home Basic system. The independent variable was notetaking method (notes or no notes). The dependent variable was the number of correct answers on a measure of content retention of information observed or heard in viewing or listening to the film clip. The same software was also used to analyze demographic data for significant impact on performance.

Results

Results are shown in Figures 1– 3. Notetakers scored higher than non-notetakers on every measure. However, statistics did not find significant differences between any of the groups. Nevertheless, overall immediate recall results approached significance ($t = 2.02, p = .06$) as did immediate audio recall results ($t = 2.01, p = .06$).

Figure 1: Effect of Note-Taking on Recall

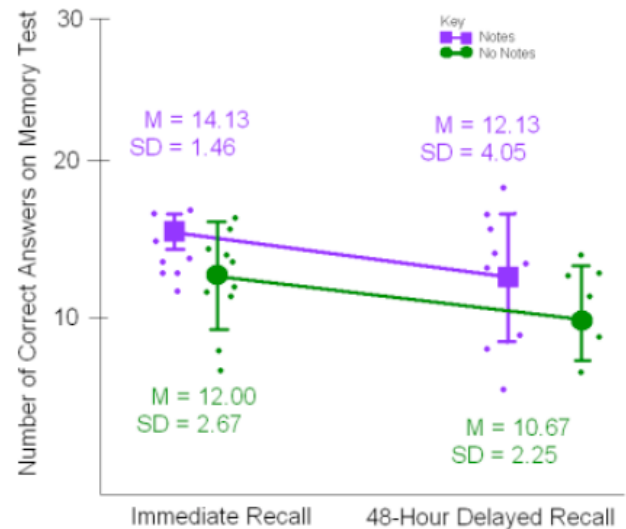


Figure 1. Effect of notetaking method on number of correct answers on the overall immediate and delayed memory tests. Notetakers performed better than non-notetakers. No significant differences were found. For immediate recall, $t = 2.02, p = .06$. For delayed recall, $t = 0.79, p = .45$. M indicates the mean for each data point. SD indicates the standard deviation from the mean. Error bars indicate standard error of the mean. Dots indicate individual scores on the test. Immediate and delayed recall divisions are explained within the text.

Figure 2: Effect of Note-Taking on Audio Recall

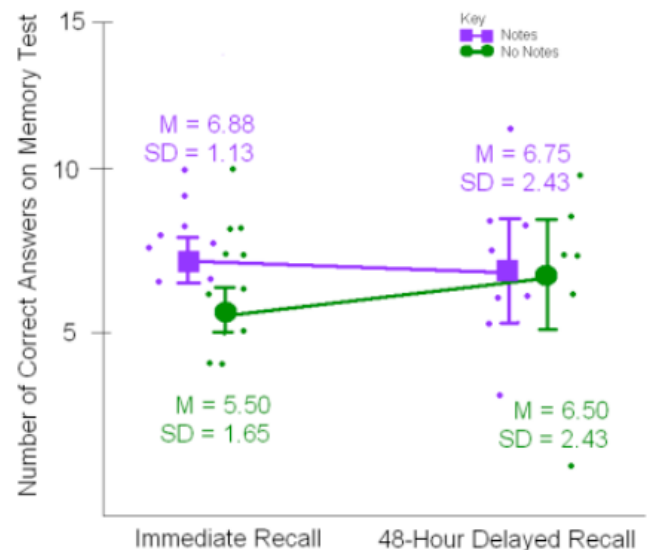


Figure 2. Effect of notetaking method on number of correct answers on the auditory items of the immediate and delayed memory tests. Notetakers performed better than non-notetakers. No significant differences were found. For immediate audio recall, $t = 2.01, p = .06$. For delayed audio recall, $t = 0.19, p = .85$. Legend is explained in Figure 1.

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Figure 3: Effect of Note-Taking on Visual Recall

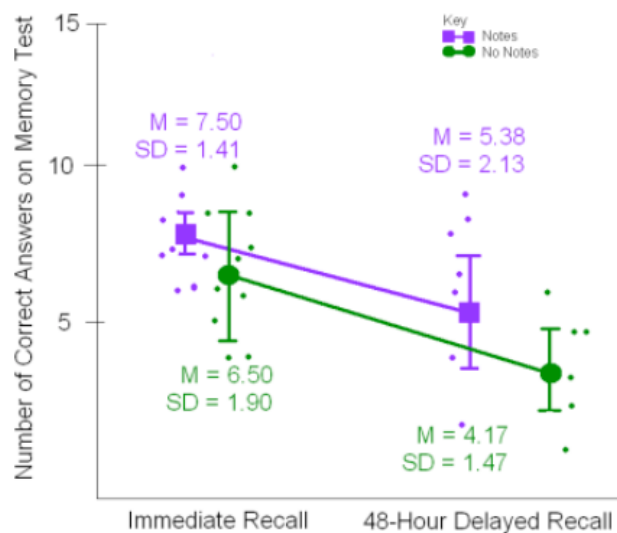


Figure 3. Effect of notetaking method on number of correct answers on the visual items of the immediate and delayed memory tests. Notetakers performed better than non-notetakers. No significant differences were found. For immediate audio recall, $t = 1.24, p = .23$. For delayed audio recall, $t = 1.19, p = .26$. Legend is explained in Figure 1.

Discussion

Though results showed no statistically significant differences in test performance, several findings approached significance. Overall, notetakers scored higher than non-notetakers on both immediate and 48-hour delayed recall tests. Notetakers also scored consistently higher on both audio and visual questions. These results were unexpected, because notetaking inherently requires the notetaker to look away from the visual presentation on which participants are later tested. Notetakers were predicted to score higher on audio recall, and non-notetakers were predicted to score higher on visual recall. However, despite the visual disadvantage, notetakers scored higher than non-notetakers on visual recall. This finding could mean that notetaking somehow enhances the brain's retention of information.

Additionally, as seen in Figures 1–3, the notetaking group averaged smaller standard deviations than the non-notetaking group. In other words, notetakers had more identical within-group scores across time, whereas the non-notetaking group had greater variance in scores over time. The lower variance in scores indicates that notetaking has a *consistent* effect on performance, indicating a possible trend.

Several factors could potentially have affected the

participants' performance on the recall tests, creating limitations within the study. The current study did not control for notetaking quality in either group. Quality of notes has been shown to affect recall (Peverly et al., 2007). Variables such as transcription fluency, fine motor skills, reading comprehension ability, verbal working memory, executive attention, accuracy of notes, previous knowledge of the subject, and focus on text note quality can all affect the quality of notes (Peverly, et al., 2007; Sumowski, 2008; Williams & Eggert, 2002). Previous memory ability could also significantly affect performance on a memory test. Gobet (2000) reviewed a theory that long-term memory schemas and retrieval structures may enhance memory. However, based on the homogeneity of the participants' education level and other demographics, this study assumed similar memory abilities and notetaking quality between participants.

Another possible confounding factor is participant stress level, which has been shown to have an impact on memory (Tollenaar, Elzinga, Spinhoven, & Everaerd, 2008). In their study, Tollenaar et al. (2008) found that those exposed to stress performed poorer in both immediate and delayed recall than those who were not exposed to stress. In the current study, the notetaking group reported higher stress than the non-notetaking group, but the difference was statistically insignificant, as noted in the methods section. It is unknown whether this difference in stress level was due to testing or to larger life factors for which this study did not control.

This study could also have benefited from a different scoring procedure. In this study, demographic information was not connected to individual scores, and individual immediate/delayed scores were not connected. This means that within-subjects scores could not be analyzed. A within-subjects analysis would have more accurately shown the effects of variables on participants. Also, control participants and experimental participants were tested together. Participants could possibly have cheated. It was assumed that students adhered to their university's academic honesty code. A further test weakness is that the tests were not psychometrically tested for either reliability or validity. Rather, both tests were constructed by the authors to adequately reflect content of the video. A validated measure of visual recall would have been more beneficial to the study, but would also be extremely challenging to administer, due to the lack of actual research on the topic. The authors found no such psychometrically validated tests for recall of a video.

The greatest weakness of this study was its lack of statistical power. The immediate recall test had only

18 participants, and the delayed recall test had only 14 participants. The sample was homogenous and not randomly selected. This was probably the greatest contribution to a lack of statistically significant results. Congruently, the greatest improvement in this study would be a larger sample size, which would give the statistical analysis more power and reveal a stronger or smaller effect. However, this study was intended only as a pilot study with a small sample size to examine potential notetaking effects. This study fulfilled that purpose.

Though the data were statistically insignificant, the data neared significance and indicate a consistent positive trend effect of notetaking on both audio and visual recall. The results of this study agree with previous research that has found notetaking to positively affect test performance on audio recall (Kobayashi, 2005). The experimenters found no previous literature about the effect of notetaking on visual recall, and thus cannot compare their results to validated research. The experimenters believe that further study is merited, particularly with a larger sample and statistical analysis of the memory assessments, and would yield more reliable and predictive results.

References

- Aiken, E., Thomas, G., & Shennum, W. (1975). Memory for a lecture: Effects of notes, lecture rate, and informational density. *Journal of Educational Psychology*, 67, 439–444.
- Ash, P., & Carlton, B. (1953). The value of notetaking during film learning. *British Journal of Educational Psychology*, 23, 121–125.
- Bolla-Wilson, K., & Blecker, M. (1986). Influence of verbal intelligence, sex, age, and education on the Rey Auditory Verbal Learning Test. *Developmental Neuropsychology*, 2, 203–211.
- Di Vesta, F. J., & Gray, G. S. (1972). Listening and note taking. *Journal of Educational Psychology*, 63, 8–14. doi:10.1002/acp.1086
- Einstein, G., Morris, J., & Smith, S. (1985). Note-taking, individual differences, and memory for lecture information. *Journal of Educational Psychology*, 77, 522–532. doi:10.1037/0022-0663.77.5.522
- Ellenbogen, J. M., Hulbert, J. C., Jiang, Y., & Stickgold, R. (2009). The sleeping brain's influence on verbal memory: Boosting resistance to interference. *Plos One*, 4(1), e4117–e4117.
- Fisher, J. L., & Harris, M. B. (1973). Effect of note taking and review on recall. *Journal of Educational Psychology*, 65, 321–325.
- Gobet, F. (2000). Some shortcomings of long-term working memory. *British Journal of Psychology*, 91, 551–570.
- Knight, L., & McKelvie, S. (1986). Effects of attendance, note-taking, and review on memory for a lecture: Encoding vs external storage functions of notes. *Canadian Journal of Behavioural Science*, 18, 52–61. doi:10.1037/h0079957
- Kobayashi, K. (2005). What limits the encoding effect of note-taking? A meta-analytic examination. *Contemporary Educational Psychology*, 30, 242–262. doi:10.1016/j.cedpsych.2004.10.001
- Larson, R. (2009). Enhancing the recall of presented material. *Computers & Education*, 53, 1278–1284. doi:10.1016/j.compedu.2009.06.010
- National Geographic. (Paula Apsell). (1998). *Mysteries of Egypt* [DVD]. Available from lib.byu.edu.
- Piolat, A., Olive, T., & Kellogg, R. T. (2005). Cognitive effort during note taking. *Applied Cognitive Psychology*, 19, 291–312.
- Peverly, S., Ramaswamy, V., Brown, C., Sumowski, J., Alidoost, M., & Garner, J. (2007). What predicts skill in lecture note taking? *Journal of Educational Psychology*, 99, 167–180. doi:10.1037/0022-0663.99.1.167
- Rey, A. (1941). *L'examen de Clinique en Psychologie*. Paris: Presses Universitaires de France.
- Sumowski, J. (2008). Cognitive and motivational variables underlying text notetaking skill among undergraduate students. *Dissertation Abstracts International Section A*, 68, 4201.

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Tollenaar, M., Elzinga, B., Spinhoven, P., & Everaerd, W. (2009). Psychophysiological responding to emotional memories in healthy young men after cortisol and propranolol administration. *Psychopharmacology*, 203, 793–803. doi:10.1007/s00213-008-1427-x

Weiland, A., & Kingsbury, S. J. (1979). Immediate and delayed recall of lecture material as a function of note taking. *Journal of Educational Research*, 72, 228–230.

Williams, R., & Eggert, A. (2002). Notetaking predictors of test performance. *Teaching of Psychology*, 29, 234–237.

Latter-day Saint Religious Media and Perfectionism

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ABSTRACT *Links between exposure to religious media and perfectionism were investigated in 121 Latter-day Saint (LDS), Brigham Young University students. Random assignment was given to view an LDS religious video or no video, after which participants filled out a questionnaire assessing the effects of LDS media on perfectionism. The 35-item Frost Multidimensional Perfectionism Scale (FMPS) scored students' perfectionism. Our hypothesis, that viewing an LDS religious video would increase adaptive perfectionism scores and decrease maladaptive scores, was not supported. However, a post-hoc analysis showed a significant interaction effect between gender and video exposure among single participants. Unmarried males had lower perfectionism scores after watching the video, while unmarried females had higher scores after watching the video. We conclude that perfectionism and religious influence may interact differently in different individuals and demographic groups, especially by gender. Because 90% of the sample was unmarried, further research is needed to explore this connection in different populations. Also, because our data is based on post-hoc analysis, similar studies should be conducted to confirm our findings.*

Perfectionism is an unwillingness to settle for anything less than an impeccable personal ideal, recognizable by doubts about actions, excessive concern over mistakes, high personal standards, and parental and societal pressure (Hewitt, 1991; Frost, Marten, Lahart, & Rosenblate, 1990). Perfectionism has been widely studied for many years. It is frequently linked with eating disorders (Sassarolia et al., 2008; Bardone-Cone, Sturm, Lawson, Robinson, & Smith, 2010), including links with anorexia, body image, and self-esteem, which not only makes perfectionism a psychological concern, but also makes it a health concern. Perfectionism has been linked with depression (Sassarolia et al., 2008), obsessive-compulsive disorder (OCD) (Zohar et al., 2005), and anxiety (Arable, 2010). The single most well-established factor leading to

perfectionism is perfectionism in the individual's mother (Cook & Kearney, 2009; Frost, Lahart, & Rosenblate, 1991), but many researchers have also studied religion as a possible moderator in the development of perfectionism. Most of this research is devoted to the study of religiosity, or personal religious devotion.

In addition to studying the causes of perfectionism, several researchers have defined perfectionism in terms of different dimensions (Hewitt, 1991; Frost, Marten, Lahart, & Rosenblate, 1990), the simplest of which is contrasting maladaptive, or "bad" perfectionism, with adaptive, or "good" perfectionism. Hewitt proposed three dimensions: self-oriented, other-oriented, and socially prescribed perfectionism. All three have links to maladaptive conditions and behaviors, but self-oriented perfectionism, which is personal and intrinsically motivated, has also been linked with positive outcomes (Hewitt, 1991). For example, Corrigan (1998), using Hewitt's perfectionism scale, found that other-oriented and socially prescribed perfectionism are correlated with a negative image of God among clergy, including a belief of God as uninvolved in coping. Other researchers divided perfectionism into six dimensions (Frost, Marten, Lahart, & Rosenblate, 1990), the most maladaptive of which are concerns about mistakes and doubts about actions.

We theorize that, in general, intrinsically motivated religiosity (or religious practice motivated internally, as opposed to socially) will increase adaptive dimensions of perfectionism and decrease maladaptive perfectionism, given that religiosity has been correlated with a number of positive outcomes. For example, measures of religiosity have been positively correlated with mental health and life satisfaction (Abdel-Khalek, 2009; Okulicz-Kozaryn, 2010), as well as with physical health (Oman & Thoresen, 2005; Gill, Barrio Minton, & Myers, 2010). Intrinsic religiosity has been specifically associated with high self-esteem and academic performance in students at Brigham Young University (BYU) (Furr et al., 2007; Cannon,

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Barnet, Righter, Larson, & Barrus, 2005).

In 2008, Edgington, Richards, Erickson, Jackson, and Hardman performed a landmark study on women with eating disorders and perfectionism who are also members of The Church of Jesus Christ of Latter-day Saints (LDS Church). In semi-structured interviews, they found that participants reported feeling social pressures to be ideal. Participants also reported that religious doctrine, notably the doctrine of Jesus Christ's suffering and death, seemed at first to be a source of guilt. However, as they confronted their feelings about these doctrines, they reported better feelings about themselves. Since eating disorders have common links to perfectionism (Sassarolia et al., 2008), and religion-based therapy can help Latter-day Saint women with eating disorders (Edgington, Richards, Erickson, Jackson, & Hardman, 2008), it follows that religious doctrine may have a beneficial effect on perfectionism, perhaps specifically in Latter-day Saints.

Many other researchers have studied links between religiosity and perfectionism. For example, Corrigan (1998) found that perfectionism is linked to certain types of religiosity in clergy, Thelander (2003) found that maladaptive perfectionism is correlated with a poor relationship with God, and Heise and Steitz (1991) theorized that a misinterpretation of the Bible can lead to a philosophy of spiritual *perfection*, as opposed to a healthy philosophy of spiritual *progress*. However, almost all of the empirical research done thus far on the interaction between religion and perfectionism is based on self-report measures of personal religious devotion; in fact, other options seem absent from dialogue on measuring religiosity and its effects (Bjarnason, 2007; Clarke, 2006; Gummerum, 2008). Self-report measures of personal religiosity have many weaknesses, such as requiring a particular language, catering to a particular religious background (Abu-Rayya, Abu-Rayya, & Khalil, 2009), relying on participants' subjective opinions of themselves, and being limited to correlational study. Exposure to religious media should also be studied, given that it can be subjected to experimental study, giving researchers a more direct key to the effects of religion on individuals. Religious media is also an independent topic worthy of study, given the powerful influence of both religion and media (Hosseini, 2008).

Although it is known that religiosity is linked to better health, that Latter-day Saint religious discussion can help women with eating disorders, and that certain LDS religious media can improve self-esteem, no research has been done on the effect of religious media

on perfectionism. This study will specifically focus on the effect of LDS doctrine on adaptive and maladaptive perfectionism scores, comparing a group who watches a video presenting LDS religious doctrine to one who does not. Our primary hypothesis is that exposure to the religious video will result in higher scores on adaptive dimensions of perfectionism. Our secondary hypothesis is that exposure to the video will cause lower scores on maladaptive perfectionism.

Method

Participants for this study were BYU students recruited through internet-based recruiting and survey resources (SONA and Qualtrics). The students were randomly assigned to be in either the control or experimental group. Data were analyzed using the General Linear Model of Statistical Package for the Social Sciences 17.0 (SPSS 17.0).

A total of 123 students made up the original sample. Exclusion factors included non-BYU students, non-LDS students, and students who did not complete the entire experiment (which excluded 2 of the original 123 students in the sample). Participants ranged between the ages of 18 and 44 with a mean of 20.4, and 55% of the participants were women (see Table 1 for a summary of sample demographics). Most notably, only 9.9% of the sample was currently married, while 90.1% were currently not married. Only two participants were

Table 1. *Demographics*

	N (121)	Percentage	Mean	Std. Deviation
Age	121	--	20.47	3.047
Males	55	45.45%	--	--
Females	66	54.55%	--	--
Single	109	90.08%	--	--
Married	12	9.92%	--	--
From Utah	39	32.23%	--	--
From Elsewhere (US)	80	66.12%	--	--
From Elsewhere (non-US)	2	1.65%	--	--

from outside the United States. The analysis found no statistically significant demographic differences between the experimental and control group.

This study used a between-subjects experimental design to compare results of the two participant groups. The independent variable was manipulated by the participant either watching a religious video clip (Mormon Messages, 2009) or not watching a video. In order to make the video clip as representative of LDS media as possible, a clip was chosen that focuses on the life and death of Jesus Christ, which is a central and foundational part of Latter-day Saint religion. The dependent variable was measured using the *Frost Multidimensional Perfectionism Scale* (FMPS). The FMPS is a 35-item scale consisting of six subscales, which can be used to distinguish between adaptive and maladaptive perfectionism. Respondents indicated their agreement with items using a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree), with higher scores indicating greater perfectionism. Sample questions include “My parents never tried to understand my mistakes,” and “It is important to me that I be thoroughly competent in everything I do.” The FMPS has been found to be valid and reliable by a number of studies (Frost, Heimberg, Holt, & Mattia, 1993; Parker & Adkins, 1995). The original study found that the FMPS had a Cronbach’s alpha of .91, with subscales’ Cronbach’s alphas ranging from .77 to .94, as well as high correlations with other measures of perfectionism (Frost, Marten, Lahart, & Rosenblate, 1990). We measured adaptive perfectionism by adding together the personal standards, organization, and parental expectations subscales. Maladaptive perfectionism was measured using the parental criticism, doubts about actions, and concern over mistakes subscales.

Both the video and questionnaire were administered online through Qualtrics. Participants expressed consent electronically and filled out a short demographics questionnaire. The experimental group completed a manipulation check (two open-ended questions about their reaction to the video clip) to ensure completion and understanding of the religious video. An analysis of the manipulation check revealed that all participants watched and were able to report on the content of the video, suggesting that the independent variable manipulation of exposure to a religious video was successful.

Results

We found that the control group had a mean adaptive perfectionism score of 64.63 with a *SD* of 8.46 (see Figure 1). The experimental group mean for adaptive perfectionism was 63.96 with a *SD* of 8.04. Contrary to our hypothesis, we found that there was no statistically significant difference ($p = .66$) in regards to adaptive perfectionism scores between students who watched an LDS doctrinal video and those who did not.

Maladaptive perfectionism had a mean for the control group of 42.76 with a *SD* of 10.52 (see Figure 1). The experimental group had a mean maladaptive perfectionism score of 44.29 with a *SD* of 9.97. We failed to support our secondary hypothesis, as the data indicated that there was no significant difference in maladaptive perfectionism scores between the two groups ($p = .42$).

We did find, using post-hoc analysis, that there was a significant interaction effect between gender and exposure to the video among single participants ($p = .037$; see Figure 2). For the experimental group, the mean overall perfectionism score for unmarried males was 4.7 points *lower* than the control group. Single females who watched the video averaged a score 5.5 points *higher* than single females in the control. In other words, after watching the video, single males had lost some of their perfectionism, while single females had gained more perfectionism. Single men also started out with slightly higher overall perfectionism scores than single women, though this difference was not statistically significant. Married males and females showed the opposite pattern: married men in the experimental group had higher perfectionism, and married women in the experimental group had lower perfectionism. However, the results for married individuals were not statistically significant, likely due to the small number of married participants.

Discussion

This study aimed to discover possible links between perfectionism and religious influence among LDS college students. Our primary hypothesis was that exposure to a video discussing religious doctrine would result in higher scores on adaptive dimensions of perfectionism. Our secondary hypothesis was that exposure to a doctrinal video would cause lower scores on maladaptive perfectionism. No such results were found. However, exposure to a religious video did result in higher perfectionism scores

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(both maladaptive and adaptive) for single females and lower scores for single males. We conclude that reactions among Latter-day Saint BYU students to a given religious stimulus may vary based on a variety of factors, including gender and marital status.

One implication of our research is that many moderators may exist between religious influence and perfectionism. This is consistent with research showing that the Big Five trait of conscientiousness can predict long-term increases in perfectionism (Stoeber, Otto, & Dalbert, 2009), and that many personality traits and some mental illnesses have correlations with perfectionism (Ashby, Kottman, & Stoltz, 2006; Huprich, Porcerelli, Keaschuk, Binienda, & Engle, 2008), suggesting that certain personality traits may lead an individual to interpret a religious message—or other environmental stimuli—in a way that increases perfectionism. This concept of a complex relationship between personality, perfectionism, and religion is supported by research showing that intrinsic (personal) and extrinsic (social) religiosity have different effects on the self-esteem and academic performance of BYU students (Furr et al., 2007; Cannon, Barnet, Righter, Larson, & Barrus, 2005).

Perfectionism may also operate differently in men versus in women, as suggested by research showing that male perfectionism correlates with increased care-based judgments and decreased justice-based judgments, while female perfectionism has the opposite relationship or no relationship at all (Agerström, Möller, & Archer, 2006). Our study's results may also be due to the greater number of religious status markers for men than for women in The Church of Jesus Christ of Latter-day Saints (M. Cornwall, personal communication, March 19, 2010). For example, men are more likely to be missionaries and hold prominent Church positions. With fewer such markers of religious success, women's contributions to the Latter-day Saint community may be less visible and may be culturally marginalized (A. Lewis, personal communication, September 9, 2010), which could lead to doubts about actions and concern about mistakes, key dimensions of perfectionism (Frost, Marten, Lahart, & Rosenblate, 1990).

Another implication is that religious influence may play a role in development, prevention, and treatment of perfectionism, as it can for LDS women with eating disorders (Edgington, Richards, Erickson, Jackson, & Hardman, 2008). It is known that perfectionism in the individual's mother often leads to perfectionism (Woodside et al., 2002; Frost, Lahart, & Rosenblate, 1991; Cook & Kearney, 2009), but few other factors have

been explored in the development of perfectionism.

One major limitation of our study is that we studied a limited population: Latter-day Saint undergraduate students at Brigham Young University. Also, most of the students were recruited out of courses in psychology. Therefore, the application of our findings to other populations is limited. Another limitation is that a different religious video clip, focusing on different doctrines, might have a different effect on perfectionism. While we chose a video clip focusing on a relatively central doctrine, our video clip may not be representative of all religious influences, even within the Latter-day Saint community. We also had no way of measuring the stability of our findings, so the effect of the video clip on perfectionism may be temporary. In addition, our effect size was small. It is possible that exposure to repeated video clips and other religious influences, over a longer period of time, may create a larger effect. Finally, our findings came from a post-hoc analysis: by exploring a large number of possible relationships between variables, we increased the chance that coincidence could influence our data. Therefore, similar studies need to confirm our findings.

Future study should focus on other populations, including married BYU students, students who are not Latter-day Saints, and people of all ages. For example, another study could explore if religious status markers such as marriage, parenthood, serving as a missionary, having responsibilities at church, etc., change the way people react to religious media. Further research should also explore the possibility that perfectionism affects men and women differently, since research suggests that perfectionism affects men and women differently in their moral reasoning (Agerström, Möller, & Archer, 2006).

Overall Perfectionism Scores

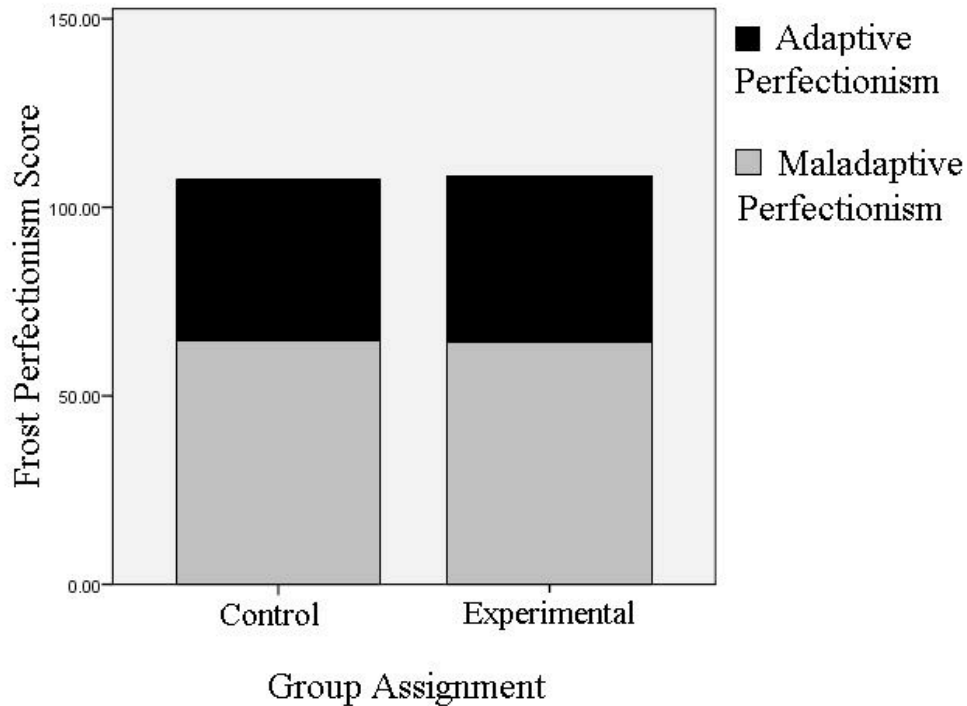


Figure 1. No significant differences in overall, adaptive, or maladaptive perfectionism.

Gender, Religious Media, and Perfectionism

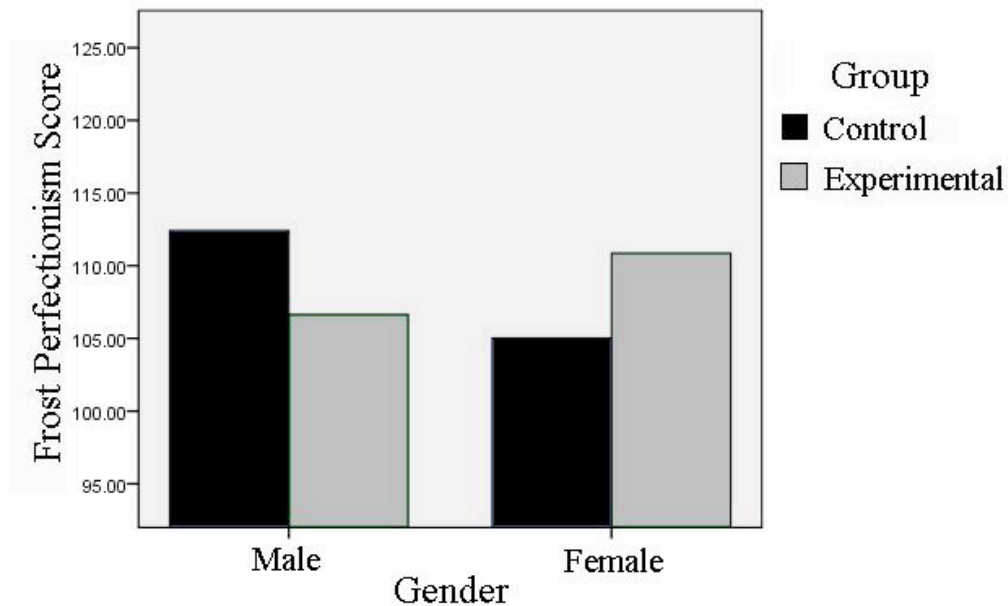


Figure 2. Effect of religious media on overall perfectionism scores for single BYU students by gender ($p = .037$).

References

- Abdel-Khalek, A. (2009). Religiosity, subjective well-being, and depression in Saudi children and adolescents. *Mental Health, Religion & Culture*, 12, 803–815. doi:10.1080/13674670903006755
- Abu-Rayya, H., Abu-Rayya, M., & Khalil, M. (2009). The multi-religion identity measure: A new scale for use with diverse religions. *Journal of Muslim Mental Health*, 4, 124–138. doi:10.1080/15564900903245683
- Agerström, J., Möller, K., & Archer, T. (2006). Moral reasoning: The influence of affective personality, dilemma content and gender. *Social Behavior and Personality*, 34, 1259–1276. doi:10.2224/sbp.2006.34.10.1259
- Arale, K. (2010). The connection between perfectionism and depression, anxiety, and anger with consideration of ethnicity. *Dissertation Abstracts International*, 70.
- Ashby, J., Kottman, T., & Stoltz, K. (2006). Multidimensional Perfectionism and Personality Profiles. *Journal of Individual Psychology*, 62, 312–323.
- Bardone-Cone, A. M., Sturm, K., Lawson, M. A., Robinson, D. P., & Smith, R. (2010). Perfectionism across stages of recovery from eating disorders. *International Journal of Eating Disorders*, 43, 139–148.
- Bjarnason, D. (2007). Concept analysis of religiosity. *Home Health Care Management & Practice*, 19, 350–355. doi:10.1177/1084822307300883
- Cannon, C., Barnet, C., Righter, A., Larson, B., & Barrus, K. (2005). Religiosity and GPA at Brigham Young University. *Intuition*, 1, 11–15.
- Clarke, S. (2006). Religiosity and spirituality in younger and older adults. *Dissertation Abstracts International*, 66.
- Cook, L., & Kearney, C. (2009). Parent and youth perfectionism and internalizing psychopathology. *Personality and Individual Differences*, 46, 325–330. doi:10.1016/j.paid.2008.10.029
- Corrigan, C. (1998, July). The relationships among perfectionism, God image, religious coping style, and vocational burnout in Christian clergy: An empirical investigation. *Dissertation Abstracts International*, 59.
- Edgington, S., Richards, P., Erickson, M., Jackson, A., & Hardman, R. (2008). Perceptions of Jesus Christ's atonement among Latter-day Saint women with eating disorders and perfectionism. *Issues In Religion And Psychotherapy*, 32(1).
- Frost, R., Heimberg, R., Holt, C., & Mattia, J. (1993). A comparison of two measures of perfectionism. *Personality and Individual Differences*, 14, 119–126.
- Frost, R., Lahart, C., & Rosenblate, R. (1991). The development of perfectionism: A study of daughters and their parents. *Cognitive Therapy and Research*, 15, 469–489. doi:10.1007/BF01175730
- Frost, R., Marten, P., Lahart, C., & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research*, 14, 449–468. doi:10.1007/BF01172967
- Furr, K., Woestman, A., Farrell, J., Goodwin, B., & Jensen, B. (2007). Effects of L.D.S. doctrine versus L.D.S. culture on self-esteem. *Intuition*, 3, 23–29.
- Gill, C., Barrio Minton, C., & Myers, J. (2010). Spirituality and religiosity: Factors affecting wellness among low-income, rural women. *Journal of Counseling & Development*, 88, 293–302.
- Gummerum, M. (2008). Review of 'messung und korrele von religiosität' [measurement and correlates of religiosity]. *Journal of Moral Education*, 37, 261–263.
- Heise, R., & Steitz, J. (1991). Religious perfectionism versus spiritual growth. *Counseling and Values*, 36, 11–18.
- Hewitt, P. L. L. (1991). Perfectionism in the self and social contexts: Conceptualization, assessment, and association with psychopathology. *Journal of Personality and Social Psychology*, 60, 456–470.
- Hewitt, P. L., Flett, C. L., Ediger, E. (1995). Perfectionism traits and perfectionistic self-presentation in eating disorder attitudes, characteristics, and symptoms. *International Journal of Eating Disorders*, 8, 317–326.

- Hosseini, S. (2008). Religion and media, religious media, or media religion: Theoretical studies. *Journal of Media and Religion*, 7, 56–69. doi:10.1080/15348420701838350.
- Huprich, S., Porcerelli, J., Keaschuk, R., Binienda, J., & Engle, B. (2008). Depressive personality disorder, dysthymia, and their relationship to perfectionism. *Depression and Anxiety*, 25, 207–217. doi:10.1002/da.20290
- Mormon Messages. (20 January 2009). *The Only True God & Jesus Christ Whom He Has Sent* [Video clip]. Accessed in February–March 2009 from <http://www.youtube.com/watch?v=QtEQ8Tjr2EI>
- Okulicz-Kozaryn, A. (2010). Religiosity and life satisfaction across nations. *Mental Health, Religion & Culture*, 13, 155–169. doi:10.1080/13674670903273801
- Oman, D., & Thoresen, C. (2005). Do Religion and Spirituality Influence Health? In R. F. Paloutzian & C. L. Park (Eds.), *Handbook of the Psychology of Religion and Spirituality* (pp. 435–459). New York, NY US: Guilford Press.
- Sassarolia, S., Lauro, L. J. R., Ruggiero, G. M., Mauri, M. C., Vinai, P., & Frost, R. (2008). Perfectionism in depression, obsessive-compulsive disorder and eating disorders. *Behaviour Research and Therapy*, 46, 757–765.
- Stoeber, J., Otto, K., & Dalbert, C. (2009). Perfectionism and the Big Five: Conscientiousness predicts longitudinal increases in self-oriented perfectionism. *Personality and Individual Differences*, 47, 363–368.
- Thelander, S. (2003, May). The relationship of adaptive and maladaptive dimensions of perfectionism to qualities of spiritual functioning. *Dissertation Abstracts International*, 63.
- Woodside, D., Bulik, C., Halmi, K., Fichter, M., Kaplan, A., & Berrettini, W. (2002). Personality, perfectionism, and attitudes towards eating in parents of individuals with eating disorders. *International Journal of Eating Disorders*, 31, 290–299. doi:10.1002/eat.10032
- Zohar, A. H., Goldman, E., Calamary, R., & Mashiah, M. (2005, July). Religiosity and obsessive-compulsive behavior in Israeli Jews. *Behaviour Research and Therapy*, 43, 857–868.

Self-Esteem

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ABSTRACT *Although self-esteem is a well-researched topic, there are some aspects of self-esteem that have been left out of the research. The I've Got Self-Esteem Questionnaire (IGSEQ), a 10-item measure, seeks to balance the existing research focusing on mother-figure support and inborn aspects of appearance by conversely evaluating self-esteem through the domains of father-figure support and controllable aspects of appearance, such as personal hygiene and grooming. Using a 4-point Likert scale, the IGSEQ was administered to a convenience sample of 101 college-age students (64 female and 37 male). The IGSEQ demonstrated acceptable internal consistency ($\alpha = .73$) and had acceptable content validity ratios ($1 \geq .36$). Principal component analysis revealed two primary factors, corresponding with father-figure support and appearance as measures of self-esteem. While most items loaded equally and significantly on our intended domains, one item had a negative correlation with both the domain of appearance and other specific items of appearance. Results indicated the IGSEQ was highly reliable and accurately measured two independent domains of self-esteem: appearance and father-figure support, and with revisions, can be administered in addition to or incorporated with other measures of self-esteem.*

Self-esteem is defined as an “individual’s perception of [his or her] worth” (Ziller, Hagey, Smith, & Long, 1969, p. 84), which is a very comprehensive construct that includes internal, external, social, and personal measures for self-esteem (Anthony, Holmes, & Wood, 2007; Crocker, Luhtanen, & Cooper, 2003). Low self-esteem is a predictor of many negative behaviors including depression (Crocker et al., 2003), eating disorders, and pornography viewing (Green et al., 2009; Nelson, Padilla-Walker, & Carroll, 2010). Knowing the level of one’s self-esteem is especially salient to young adults as they begin independent life. If young adults, parents, or health care professionals are aware of the risks for these harmful behaviors, they can take measures to increase self-esteem in young adults before they fall victim.

Various researchers define appearance as a domain of self-esteem. Ideal or accepted body image has been positively correlated with higher self-esteem (Crocker et al., 2003). Both men and women value appearance in terms of physical attributes (Mendelson, McLaren, Gauvin, & Steiger, 2001; Tiggemann, Martins, & Churchett, 2008). Weight for women (Mendelson et al., 2001) and muscularity, penis size, and height for men (Tiggemann et al., 2008) are consistently cited as the most important factors contributing to self-esteem in relation to appearance. Individuals have little control over these physical characteristics; however, many controllable qualities also contribute to self-esteem. DiScipio and Trudeau (1972) conducted a study on aspects of appearance that can be controlled. They researched the effects of hygiene and grooming behaviors on the self-esteem of institutionalized psychotics. Their results found that those patients who were reinforced to improve hygiene and grooming said significantly fewer negative statements about themselves and had significantly better self-esteem. This research supports the idea that controllable aspects of appearance, specifically hygiene and grooming, play an important role in self-esteem. Our study builds off the previous research by postulating that hygiene and grooming are reflections of one’s self-esteem as well as ways to improve self-esteem. For the purposes of this study, hygiene and grooming will provide easily measurable factors with which to survey the relationship between appearance and self-esteem in a self-report measure.

Previous research has repeatedly demonstrated a link between approval from others and an individual’s self-esteem (Crocker et al., 2003). For example, acceptance from others in the form of parental support is essential for continuous high self-esteem (Anthony et al., 2007). This research also applies to adults, who are often influenced by childhood parental support into adulthood (Bean,

Bush, McKenry, & Wilson, 2003). Similarly, in accordance with Bowlby's (1969) theory of attachment, the relationship between infant and father is equally as strong as the relationship between infant and mother. Adolescents separated from their fathers scored lower on measures of self-esteem (McCormick & Kennedy, 2000). This research also demonstrated that individuals who reported longer separation from fathers also reported lower paternal acceptance in general (McCormick & Kennedy, 2000). According to The National Campaign to Prevent Teen and Unplanned Pregnancy (2008) teens who grow up in families with both a mother and a father are less likely to have sex and more likely to avoid teen pregnancy. Fathers have an empowering influence on their daughters by providing them with support. Fathers also influence their sons by teaching that having sex does not equate with manliness (The National Campaign to Prevent Teen and Unplanned Pregnancy [The National Campaign], 2008). The presence of a father-figure helps teenagers develop the self-esteem to make smart decisions about sex.

Additionally, Gomez and McLaren (2007) found that father attachment significantly predicted self-esteem and aggression in children, which demonstrates that father-figures can influence what children believe about themselves, and how they behave towards others. Similarly, fathers' interest in children's lives correlated with children's internal locus of control and educational attainment (Flouri, 2006). These findings indicate the significant influence of a father on all aspects of children's lives and futures, self-esteem being one of the most important aspects under influence. Such research indicates that for children a relevant connection exists between self-esteem and father-figure acceptance, a topic that warrants more research in additional populations. This study will seek to add to the limited existing research regarding parental support and children's self esteem by focusing primarily on father-figure support as a measure of self-esteem.

To expand the body of research on appearance and parental support as measures of self-esteem, we operationally define self-esteem through external measures of appearance and father-figure support. Appearance is defined as personal hygiene and grooming, which are aspects of appearance that are within an individual's control. Research indicates many parental support domains exclude father-figure support in their definitions of self-esteem (Bean, et al., 2003; McCormick & Kennedy, 2000), thus, in this study, parental support will be defined exclusively

as perceived father-figure support. Because self-esteem is an indicator of mental health (Crocker et al., 2003; Green et al., 2009; Nelson et al., 2010), individuals and society at large can benefit from a greater understanding of self-esteem and its contributors. As self-esteem has previously been measured using the domains of parental support and appearance, little current research utilizes the definitions of parental support as father-figure support and appearance as personal hygiene and grooming. We hypothesized that the *I've Got Self-Esteem Questionnaire* (IGSEQ) would reliably and validly measure self-esteem.

Method

Participants

Participants consisted of a convenience sample of 101 college-aged individuals. The sample included 37 male participants (participant age: $M = 22.97$, $SD = 2.35$) and 64 female participants ($M = 21.24$, $SD = 5.409$).

Item Construction

The IGSEQ was created using 10 questions from an original collection of 30 items. A panel of 23 members in an undergraduate psychological testing course provided relevancy ratings from which the content validity ratio (CVR) was calculated (see Appendix A for the final questionnaire). The 10 questions with the highest CVR ($CVR \geq .36$) were included (see Table 1). Items were rated on a 4-point Likert scale ranging from 1 (*disagree*) to 4 (*agree*). To control for agreement bias, four questions were negatively worded and reverse scored. Face validity was determined by the question, "what do you think this questionnaire is trying to measure?"

Test Administration

Participants were recruited via Facebook (www.facebook.com), e-mail (i.e., researchers' contact lists), and word of mouth (i.e., researchers' acquaintances). Questionnaires were administered and collected electronically online via Qualtrics (www.qualtrics.com) over a period of one week. The IGSEQ was standardized for each participant of our convenience sample, meaning items were administered through the same electronic means (i.e., Qualtrics) and in the same order for each participant.

Statistical Analysis

The internal consistency of the questionnaire was calculated using Cronbach's alpha (α) (Cronbach, 1951). Using principal components analysis as a method of data reduction, we examined the factor structure of the IGSEQ

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Table 1. *Content Validity Ratio*

Item	CVR
Father-figure came to events	.64
Close to father-figure	.91
Father-figure cares	1
Support from father-figure	.45
Support even with mistakes	.82
Take pride in hygiene and grooming	.91
Importance of well-kept appearance	.73
Bodily cleanliness	.55
Good hygiene habits	.55
Confidence from hygiene and grooming	.36

was used eigenvalues above one to ascertain main factors. To understand the factors of the factor analysis, Pearson bivariate correlations were used to identify relationships among questions. The data were analyzed using SPSS 17.0.

Results

Factor Structure

Principal components analysis revealed two factors with eigenvalues greater than 1 (eigenvalues = 3.578 and 1.861) that accounted for 54.39% of the variance (see Table 2). Questions 1–5 primarily loaded onto Component 1, and Questions 6–10 primarily loaded onto Component 2.

Reliability

Cronbach's alpha indicated the internal consistency of the test was acceptable ($\alpha = .73$; see Table 3). A Pearson bivariate analysis showed 21 out of 45 correlations were significant. The five questions on father-figure support (i.e., items 1–5) correlated significantly with one another, accounting for 10 of the significant correlations. Of

the five questions on appearance (i.e., items 6–10), only Item 6 positively correlated significantly with questions on appearance. Items 7–9 cross-correlated with some father-figure support questions, and Item 10 correlated negatively with items one through nine. The remaining four correlations did not correspond with the domains ($p < .05$).

Validity

One of 10 items had perfect content validity (= 1), four of ten items had high content validity ($.70 \geq .99$), three of ten items had adequate content validity ($.50 \geq .69$), and one of ten items had low content validity ($\leq .39$; see Table 1). Only 3% of participants correctly guessed the construct (i.e., self-esteem), illustrating the test had very low face validity.

Discussion

We created the IGSEQ to reliably and validly measure self-esteem through the domains of father-figure support and appearance, by examining its psychometric properties and factor structure. Much of the current research focuses on mother-child attachment and aspects of appearance that are less easily manipulated than personal hygiene and grooming (Bean et al., 2003; Mendelson et al., 2001; Tiggerman et al., 2008). Although studies conducted on the connections between self-esteem and father-figure support and self-esteem and appearance demonstrate relationships and body image positively correlate with self-esteem (Anthony et al., 2007; Crocker et al., 2003), other domains also warrant investigation. Because the IGSEQ looked only at external aspects of self-esteem, important internal aspects (i.e., self-worth) that contribute to the hypothetical construct of self-esteem were excluded. Many additional external factors (i.e., mother-figure support and physical appearance) were also excluded. Additional internal and external aspects of self-esteem would better define self-esteem. Future research should include additional questions to cover a wider range of internal and external self-esteem domains.

Understanding of variables that contribute to self-esteem fosters knowledge of what can be done to improve self-esteem. The IGSEQ can be administered to evaluate self-esteem, and can potentially identify individuals with low self-esteem. Because low self-esteem correlates with many negative behavioral and emotional factors of depression (Crocker et al., 2003; Green et al., 2009; Nelson, Padilla-Walker, & Carroll, 2010), identifying low

Table 2. *Total Variance Explained*

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% Variance	Cumulative %	Total	% Variance	Cumulative %
1	3.58	35.78	35.78	3.58	35.78	35.78
2	1.86	18.61	54.39	1.86	18.61	54.39
3	0.99	9.88	64.27			
4	0.85	8.45	72.72			
5	0.66	6.56	79.28			
6	0.60	5.99	85.27			
7	0.49	4.92	90.19			
8	0.43	4.34	94.53			
9	0.34	3.41	97.94			
10	0.21	2.07	100.00			

Extraction Method: Principal Component Analysis

% = Percentage

self-esteem could help individuals take steps to improve their self-esteem and thus, improve negative correlates. Knowing the level of one's self-esteem is especially salient to young adults as they begin independent life. As individuals begin independent life they must create new support networks and adapt to new environments, which has been found to correlate with increased stress that can influence increases in risk factors (Crocker et al., 2003; McGillin, 2003). Young adults, parents, or health care professionals can use the IGSEQ to evaluate self-esteem levels and identify associated negative factors, making the IGSEQ worth perfecting.

The IGSEQ had acceptable internal consistency, and principal component analysis revealed two distinct factors that were consistent with our intended domains of father-

figure support and appearance. While the items loaded equally and significantly on our intended domains (i.e., items one through five represented father-figure support and items six through ten represented appearance), Item 10 had a negative correlation both on the domain and with other items of appearance. This item reads, "I do *not* feel confident if I have *not* taken care of my hygiene and grooming" [italics added for emphasis]. This item also had the lowest CVR rating of the items used. Future revisions of the IGSEQ should modify this item by creating more concise wording and specifically avoiding the use of double negatives within the question, which could increase the internal consistency.

The IGSEQ could also be improved by using CVR ratings from expert panelists because the panelists used

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were members of an undergraduate psychology testing course who lacked expert knowledge on self-esteem. This untrained panel could be a source of inaccurate CVR ratings, which could partially account for the low internal consistency of some test items. Expert panelists would lend more credibility to the questions used and increase CVR.

Additionally, the IGSEQ could be improved by including a broader population sample. Brigham Young University students were the main population surveyed, which indicates a need for additional studies to increase external validity. A more accurate sample would include participants from colleges across the country, not limited to Utah County. Also, our administration of the IGSEQ acts as the pilot study, suggesting the need for re-administering the measure to obtain more reliable data.

The IGSEQ was designed to reliably and validly measure self-esteem. Results indicated the IGSEQ was highly reliable and accurately measured two independent domains of self-esteem: appearance and father-figure support. Future research should improve the measure by using a larger sample size, including additional items to incorporate other domains associated with self-esteem, and consulting an expert panel to increase validity and reliability. With such revisions, the IGSEQ could be administered in addition to or incorporated with other measures of self-esteem. Parents, schools, and health care professionals could use this revised measure to identify young adults with negative health risks.

Table 3. *Cronbach's Alpha*

Cronbach's alpha	Cronbach's alpha standardized	N
.73	.72	10

References

- Anthony, D. B., Holmes, J. G., & Wood, J. V. (2007). Social acceptance and self-esteem: Tuning the sociometer to interpersonal value. *Journal of Personality and Social Psychology*, 92, 1024-1039. doi: 10.1037/0022-3514.92.6.1024
- Bean, R., Bush, K., McKenry, P., & Wilson, S. (2003). The impact of parental support, behavioral control, and psychological control on the academic achievement and self-esteem of African American and European American adolescents. *Journal of Adolescent Research*, 18, 523-541. doi: 10.1177/0743558403255070
- Bowlby, J. (1969). *Attachmerzt* (Vol. 1). New York: Basic Books.
- Crocker, J., Luhtanen, R. K., & Cooper, M. L. (2003). Contingencies of self-worth in college students: Theory and measurement. *Journal of Personality & Social Psychology*, 85(5), 894-908. doi: 10.1037/0022-3514.85.5.894
- Cronbach, L. (1951). Coefficient alpha and the internal consistency of tests. *Psychometrika*, 16, 297-334.
- DiScipio, W. J., & Trudeau, P. F. (1972). Symptom changes and self-esteem as correlates of positive conditioning of grooming in hospitalized psychotics. *Journal of Abnormal Psychology*, 80, 244-248.
- Flouri, E. (2006). Parental interest in children's education, children's self-esteem and locus of control, and later educational attainment: Twenty-six year follow-up of the 1970 British Birth Cohort. *British Journal of Educational Psychology*, 76, 41-55.
- Gomez, R., & McLaren, S. (2007). The inter-relations of mother and father attachment, self-esteem and aggression during late adolescence. *Aggressive Behavior*, 33, 160-169.
- McCormick, C., & Kennedy, J. (2000). Father-child separation, retrospective and current views of attachment relationship with father, and self-esteem in late adolescence. *Psychological Reports*, 86, 827-834. doi: 10.2466/PR0.86.3.827-834

McGillin, V. A. (2003). Academic risk and resilience: Implications for advising at small colleges and universities. *Monograph Series*, 8, 43-52.

Mendelson, B. K., McLaren, L., Gauvin, L., & Steiger, H. (2002). The relationship of self-esteem and body esteem in women with and without eating disorders. *International Journal of Eating Disorders*, 31, 318-323. doi: 10.1002/eat.10011

The National Campaign to Prevent Teen and Unplanned Pregnancy. (2008). Fast Facts. *Dads Make a Difference*. Retrieved from <http://www.thenationalcampaign.org/>

Tiggemann, M., Martins, Y., & Churchett, L. (2008). Beyond muscles: Unexplored parts of men's body image. *Journal of Health Psychology*, 13, 1163-1172. doi: 10.1177/1359105308095971

Ziller, R. C., Hagey, J., Smith, M., & Long, B. H. (1969). Self-esteem: A self-social construct. *Journal of Consulting and Clinical Psychology*, 33, 84-95.

McGillin, V. A. (2003). Academic risk and resilience: Implications for advising at small colleges and universities. *Monograph Series*, 8, 43-52.

An Overview of the Nature–Nurture Debate and a Proposed New Paradigm

Austin D. Miller

ABSTRACT *The roots of the nature-nurture debate within psychology are briefly reviewed. Nature (that is, genetic influence) and nurture (social-environmental influence) offer two distinct perspectives on human personality and behavior. However, despite their differences, the two perspectives are philosophically identical in that both, when carried to the extreme, result in the disintegration of personal accountability and agency. The arguments for nature and for nurture imply an outward locus of control: either one's genes or one's history of social influences may be considered to adequately account for how a person behaves. Neither of these arguments gives an individual control over one's course of action and behavior. The ramifications of this view are analyzed. I argue that the lack of moral agency and personal accountability implied by this view renders the United States' legal system meaningless as far as it assumes that people can control their behavior. An alternative philosophical view is then recommended. Specifically, I propose that nature and nurture should be considered conjunctly with the noetic, the "spirit." This proposed view provides a more comprehensive explanation of individual differences in personality and behavior.*

Breaking away from past paradigms, a new movement in the nature–nurture debate seeks to more fully explain who or what is ultimately responsible for personal identity. For centuries, nature, or genetic influence, and nurture, or social-environmental influences such as parents and schools, were the only two viable positions in the debate. It has remained under continuous intellectual scrutiny because at the heart of the issue lies a problem of existential relevance: namely, what is ultimately responsible for one's behavior, personality, and success (or lack thereof) in life?

One problem in answering that question is that it is extremely difficult to determine *how much* influence a person's genetic material has on a person's behavior, intelligence, and success in life, and how much influence

social influences, such as wealth and education, contribute to them. With the modern age, a new dimension of human development has emerged, specifically, the noetic. The term comes from the Greek word for mind, and refers to a person's individual agency and freedom, but more specifically the ability to think. In this essay, agency refers to the capacity of an individual to choose and carry out any course in the presence of several options. Each of the traditional perspectives (nature and nurture) offers a unique view on the factors that shape the development of personality. However, these perspectives, taken individually, do not adequately explain how or why people develop differences in behavior and personality. At best, when these two perspectives are combined, they provide a better but still incomplete and inaccurate depiction of human behavior. Furthermore, nature, nurture, and the noetic not only represent a scientific schism but also reveal underlying disparities in life styles and philosophies: people typically support theories that reflect their cosmological perspectives of life. Nature and nurture imply moral hedonism (i.e., anything that is pleasing is morally right and anything that is displeasing is morally wrong) by asserting that we cannot control what our genes/society dictate us to do, whereas the noetic preserves moral responsibility by declaring that despite the influences in our lives, we ultimately have the ability to choose. To better understand some of the important implications of the centuries-old debate and the relevance of the noetic for the debate, it is important to understand its origins and how the debate has evolved subsequently.

Officially, the nature–nurture debate can trace its origin to 1874 even though it has been discussed or at least hinted at by philosophers in all ages. In 1874, however, the intellectual world had been recently rattled by the renowned Charles Darwin, who had published *On The Origin of Species* in 1859. His cousin, Sir Francis Galton, was deeply impacted by the theory of evolution that Darwin had laid out, namely, the theory of natural

selection. Galton inferred that if animals were evolving as Darwin suggested, then humans were also evolving. Furthermore, personal experience led Galton to believe that traits such as intelligence were inherited. For example, it bothered Galton that, even though he came from a wealthy family and good environment, he was not as academically successful as he aspired to be. In addition, he noticed that genius appeared to run within families. In other words, certain lines of families seemed to be smarter than others. Also, when two smart parents had children, there was a much higher likelihood that the children also were smart. However, Galton was aware of the potential for interaction between nature and nurture. He set about testing the validity of his new theory of nature-nurture interaction. To do so, he measured and compared the intelligence and personality of adopted children relative to biological children. In 1874, Galton coined the phrase “nature and nurture,” and subsequently it found its way into mainstream psychology (Fancher, 1996, p. 216-244).

From the time of Galton until the 1920s, followers of his original assertions defended the position that although the environment can play a role in human development, nature has the upper hand and larger influence (Behaviour genetics, 2009). In a sense, advocates of nature believed that people are “destined” to certain outcomes based on their biological histories. This is not to say that there was no opposition to this position, but it was commonly accepted that intelligence and personal appearance were almost completely predetermined by one’s parents, and that personal effort would be to no avail if one’s genes did not permit the adequate potential. For example, Charles Cooley held that criminal behavior was influenced by the “inheritance of biological traits” (Beck, 1976, p. 65; Cooley, 1896, p. 399-495). In Galton’s words, “social advantages are incompetent to give [eminent] status to a man of moderate ability” (Fancher, 1996, p. 229). Galton considered the idea of “eugenics,” that is, improving the human race through selective breeding. If nature was the source of one’s intelligence, for example, why waste money or other resources on teaching children who were genetically inferior and thus destined for scholastic failure and social debauchery? The implications of this belief could be seen in the Nazi regime in Germany. The Nazis attempted to create a better world by eliminating those individuals with perceived inferior genes. For many, the implications of nature-controlled behavior cast a bleak future, void of freedom; accordingly, many began to turn to the influence of nurture and one’s environment as a scientifically viable alternative. People desired to find

alternatives that instilled hope and freedom.

In the 1920s, the belief in nurture’s crucial contributions to intelligence and personality gained prominence (Behavior genetics, 2009). This shift in perspective could be related to the individualist movement stirred by the Great Depression. People were very disheartened by the idea that there was no hope in altering their present circumstances due to genetic influences outside of their control. People may have yearned for a more controllable lifestyle as opposed to that which the Great Depression thrust upon them, and thus people turned to a nurture standpoint. However, opposition to Galton’s viewpoint was prompt and sometimes vicious. For example, Alphonse de Candolle (1806-1893), published data that supported his claim that the environment was the major influence in a person’s life. Specifically, he documented the disproportionate number of famous scientists who came from “small to moderate-sized countries with moderate climates, democratic governments, tolerant religious establishments, and thriving commercial interests”—evidences of favorable environments (Fancher, 1996, p. 230). In addition, around the 1920s, a rise in the emphasis of nurture is reflected in various studies (Miner, 1915; Kantor, 1921). This new emphasis only increased the intensity of the debate between the two sides.

To support either nature or nurture, one would have to separate the two factors and be able to study one at a time independently of the other. To many, the challenge of separating the intertwining influences of nature and nurture is simply impossible (McCall, 1981). Studies have been conducted to support both the nature and nurture side of the conflict. Advocates of the nature position insist that studies of monozygotic, or identical, twins are strongly supportive of nature. Identical twins that are raised separately in two “different” environments have been demonstrated to exhibit similar preferences in professional careers, for example (McCall, 1997, 60-77). Studies also show similarities in emotional tendencies (Strelau, Zawadzki, Oniszczenko, Angleitner, & Riemann, 2002). However, nurture supporters assert that because identical twins have a highly similar appearance, they are treated similarly and thus receive similar nurturing despite early separation (Plug & Vjverberg, 2003, 611-641; Plomin, DeFries, McClearn, 1990, 315).

Many studies suggest that an adopted child’s IQ has a greater correlation with the biological parents’ IQ than with the adoptive parents’ IQ (Burks, 1928; Leahy, 1935). These studies are countered by those that show the IQ of adopted children increasing when they are placed with higher-IQ adoptive parents or in special education

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programs (Clarke, 1984a; Rutter, 1985). However, after each battle, the futility of the argument became more and more clear; advocates of nature were never going to convince advocates of nurture and vice versa. However, both sides failed to recognize the similarities to their arguments: if scrutinized closely, underlying assumptions of both perspectives are similar in that they ultimately lead to the disintegration of personal responsibility of action: stark determinism.

Both views, nature and nurture, assume a similar locus of control for an individual: outside the individual and out of one's control. According to the nature perspective, responsibility for an individual's personality and behavior is assigned wholly to the child's parents, who cannot be blamed because they received what genetic material their parents gave them, and so on. Ultimately, in this view, people are not responsible for the way they act because they can't control it. Failures and even social deviances can be explained on a genetic level: for example, violent delinquents should not be held responsible, according to nature, because they are genetically programmed to act in that manner. According to the nurture perspective, the social ambiance and economic status of the child predominantly shape her or his subsequent life and predict behavior and tendencies. Children do not choose which country or time period they are raised in, each of which comes with its own set of morally acceptable standards, beliefs, and attitudes. Thus, according to both perspectives, a person is left with little moral agency to choose who one ultimately becomes because that is left to the mercy of nature and nurture to determine.

Beginning in the 1970s, nature and nurture came to be understood as influences that interacted much more fluidly than originally imagined. Moreover, many people were still disconcerted with the lack of personal freedom presented by nature and nurture proponents; accordingly, some opted to shift to a "new paradigm: nature, nurture, and noetic" (McLafferty, 2006, p. 3).

At the present point, psychologists need to recognize the possibility that the noetic perspective, or the "soul," may be the factor that accounts for personal differences and discrepancies not explained by nature and nurture, such as differences in dispositions and spirituality (Frankl, 1967). The noetic perspective adds such qualities as free will, agency, and spirituality to the equation of simply nature and nurture; perhaps free will further accounts for differences in behavior and personality (McLafferty, 2006). Actually, the noetic isn't a new idea at all; it just never became as popular or as mainstream as nature and

nurture; perhaps free will further accounts for differences in behavior and personality (McLafferty, 2006). Actually, the noetic isn't a new idea at all; it just never became as popular or as mainstream as nature and nurture did in psychology. For instance, Alfred Adler proposed a similar idea, namely, goal-oriented behavior (Rychlak, 1973). Instead of being dominated by genetic and social influences, one is influenced by the goals he or she individually chooses to pursue. However, critics may interpret this to mean that individuals choose goals that they have been socially, or genetically, programmed to desire. For example, if it is my goal as a child to become an astronaut when I grow up, the only reason I chose that goal may be that my father was an astronaut, and I wanted to emulate him. Through such interpretation, the heart of the noetic philosophy is corrupted because there is no longer individual freedom. According to the noetic perspective, goals can be influenced socially and/or genetically, but there must remain the capacity of the individual to choose to ignore such influences if desired and choose other goals.

Another example of the noetic perspective in action comes from the life of William James, who remains well-known for his pragmatic approach to science and psychology. He demonstrated exceptional artistic abilities in his youth. But when his father threatened to commit suicide if any son of his pursued art, William went to Harvard and studied chemistry instead. Later, in 1867, he traveled to Germany, where he was deeply impacted by the emerging mechanistic physiology. Indeed, it "powerfully impressed him intellectually, but oppressed him spiritually with its deterministic philosophical implications" (Fancher, 1996, p. 252). In fact, he became depressed to the point where he could no longer work and even considered suicide. After reading an essay on free will by Charles Renouvier, he wrote in his journal that "my first act of free will shall be to believe in free will" (Fancher, 1996, p. 254). He then began his recovery, slowly willing himself to think more positively and less oppressively. This is a remarkable case study where he merely *willed* himself out of depression; William James was given a new option and chose to follow it. A resounding belief in moral agency allowed him to overcome the social pressure towards determinism and a potential genetic disposition to depression. Nature and nurture both would have predicted depression as highly likely and yet he chose not to be depressed. It becomes clear that nature and nurture by themselves are insufficient to explain the human differences.

Nature and nurture both present a depiction of humans as puppets controlled by a manipulative gene pool or by an environmental puppeteer. By contrast, the noetic perspective offers an alternative to the logical fallacy that has riddled psychology for so long: each person is her or his own puppeteer. The nature-nurture debate is not a false dilemma as many would have us believe; there are more than just two options. So how exactly might the three factors interact in human development? Combined, they continue to build upon prior beliefs, and grant greater and deeper comprehension into human nature. For example, it is plausible that mental disorders are the interactive result of environmental and genetic factors (Rutter, 1997). Thus, a specific gene may be manifested in a manner that elicits a specific environmental influence that strengthens the effect of the gene. With the addition of the noetic, for example, perhaps a gene causes its carrier to be shy. Shyness, in turn, leads to social rejection and ultimately to antisocial behavior. Using her or his own agency, however, the carrier accepts herself or himself as being antisocial simply because of the felt *desire* to be antisocial despite the encouragement otherwise from parents and religious figures. It is conceivable that twins with similar genetic predispositions to antisocial behavior could turn out differently: one takes it upon himself or herself to stop being antisocial due to fervent religious belief while the other, who also attends the same church, remains antisocial. In other words, there are similar genes and social influences, and yet one chooses to change, but the other does not. This is the noetic in action.

Genetic research makes it difficult to deny the impact of genes on a number of traits. For instance, many studies have demonstrated the impact of genes on alcoholism, cigarette smoking, aggressive behavior, obesity, and even religious affiliation (Vrasti & Olteanu, 1988; Windle & Tubman, 1999; Sabol, 1999; and Reed, 1997, respectively). However, the same data analyzed under the noetic perspective yields different results: perhaps monozygotic twins are different simply because they *want* to be different. Perhaps there *isn't* a gene to point to for every overt behavior and subconscious thought; perhaps there is *not* a traumatic childhood or social influence event for every disorder.

In the modern era, whether people are responsible for their actions is becoming an increasingly important question in the legal system, where the terms of punishment largely rely on how legal responsibility is affixed.

Say that John is on trial for raping a woman. This is the fifth time, according to state records, that he has been charged for this crime. Is he guilty? According to the nature perspective, John is the result of a unique combination of genes that caused him to exhibit a particular set of sexual habits that society has deemed unlawful. According to the nurture perspective, John was raised in a particularly abusive and sexualized environment. His father was a notorious rapist, and thus John learned to exhibit the same traits. Both perspectives lay the responsibility for John's criminal behavior on something other *than John himself*. If John is ultimately not responsible for the way he has behaved, how can he reasonably be punished? He cannot be. Or rather, he should not be. Instead, imprison his parents for passing on defective genes or his father for being a poor role model. Taking nature and nurture viewpoints to the extreme apparently undermines the very fabric of the United States' legal system if we assume the legal system is meant to punish purposeful behavior. The legal system could, hypothetically, inject preapproved genetic code into inmates to change behavior, or attempt to correct their behavior through instruction. If this were the case, however, the legal system would be more focused on *correction*, which it clearly isn't. Are inmates subjected to lessons on morally acceptable behavior? No. Are they adopted into government-approved families to teach them proper values? No. We would sentence a prisoner according to how difficult an act was to correct, not on how severe it was. The nature and nurture perspectives not only provide theories of personality but also amoral lifestyles or at least moral ambiguity. As previously defined, morality requires personal motivation towards a specific *goal*, and thus, if a person lacks control of her or his actions and is incapable of goal motivation, nothing she or he does is morally wrong or right. Adamant believers in nature and nurture thus proclaim that since no lifestyle is morally superior to another, one may live however one so desires. This is because if genes, or our culture, ultimately dictate how we act, we cannot intend to do anything, and thus, *everything* we do is genetically/socially permissible.

It would seem unwise to attribute too much strength to nature or nurture alone. It is equally important to consider one's personal capacity for choice-making free agency. The notion of free agency provides for a viable legal system, not to mention a more fulfilling lifestyle by providing the possibility of change and control over one's outcome in life. It only makes sense to punish a person who is deemed as morally responsible, that is, capable of making choices. For this reason, children are not punished in courts the

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same way adults are. The paradigm I have proposed suggests that behavior is a result of nature, nurture, and the noetic; consequently, it would leave ramifications in the psychological and legal realms. It is a matter that is crucial to law, personal liberty, and existential fulfillment.

References

- Beck, J., Jenks, C., Keddie, N., & Young, M. F. D. (Eds.). (1976). *Toward a Sociology of Education*. New Jersey: Transaction, Inc.
- Behaviour genetics. (2011). In *Encyclopædia Britannica online*. Retrieved from <http://www.britannica.com/EBchecked/topic/58684/behaviour-genetics>
- Burks, B. S. (1928). The relative influence of nature and nurture upon mental development. *27th Yearbook of the National Society for Studies in Education*, 27, 219–236.
- Clarke, A. M. (1984a). Early experience and cognitive development. *Review of Research in Education*, 11, 125–160.
- Cooley, C. H. (1896). *Proceedings of National Conference of Charities and Correction: 'Nature v. Nurture' in making of social careers*. Grand Rapids, Michigan.
- Fancher, R. E. (1996). *Pioneers of psychology* (3rd ed.). New York, NY: W. W. Norton & Company.
- Frankl, V. E. (1967). *Psychotherapy and existentialism*. New York, NY: Washington Square Press.
- Leahy, A. M. (1935). Nature–nurture and intelligence. *Genetic Psychology Monographs*, 17, 235–308.
- McCall, B. P. (1997). Genetic Influence on job and occupational switching. *Journal of Vocational Behavior*, 50(1), 60–77.
- McCall, R. B. (1981). Nature-nurture and the two realms of development: A proposed integration with respect to mental development. *Child Development*, 52, 1–12.
- McLafferty, C. (2006). Examining unproven assumptions of Galton's nature–nurture paradigm. *American Psychologist*, 61, 177–178. doi:10.1037/0003-066X.61.2.177
- Miner, B. J. (1915). Correlation. *Psychological Bulletin*, 12, 179–186.
- Plomin, R., DeFries, J. C., & McClearn, G. E. (1990). *Behavioral Genetics: A Primer* (2nd ed). New York, NY: Freeman.
- Plug, E., & Vjverberg, W. (2003). Schooling, Family Background, and Adoption: Is It Nature or Is It Nurture? *The Journal of Political Economy*, 111(3), 611–641.
- Reed, D. R., Bachmanov, A. A., Beauchamp, G. K., & Tordoff, M. G. (1997). Heritable variation in food preferences and their contribution to obesity. *Behavior Genetics*, 27, 373–387.
- Rutter, M. (1985). Family and school influences in cognitive development. *Journal of Child Psychology and Psychiatry*, 26, 683–704.
- Rychlak, J. (1973). *Introduction to personality and psychotherapy*. Boston, MA: Houghton Mifflin.
- Strelau, J., Zawadzki, B., Oniszczenko, W., Angleitner, A., & Riemann, R. (2002). Genetic and environmental determinants of emotions: Data based on cross-country twin studies on temperament. *Polish Psychological Bulletin*, 33, 5–13.
- Vrasti, R., & Olteanu, I. (1988). The difference between biological heredity and cultural heredity: Preliminary findings in assessment of parental rearing practice by EMBU-inventory in primary alcoholism. *Revue Roumaine De Neurologie Et Psychiatrie*, 26, 171–178.
- Windle, M., & Tubman, J. G. (1999). Children of alcoholics. In W. K. Silverman, T. H. Ollendick, W. K. Silverman & T. H. Ollendick (Eds.), *Developmental issues in the clinical treatment of children*, (p. 393–414). Needham Heights, MA: Allyn & Bacon.

The Positive Effects of Fathering and the Negative Effects of a Father's Absence in the Lives of Children from Infancy to Early Adulthood: A Review of the Literature

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ABSTRACT *Paternal involvement is a crucial variable in the development of a child's internalizing and externalizing behaviors. The negative effects of a father's absence present many risk factors for children. This review of the literature seeks to combine the research surrounding the positive effects that paternal involvement yields in the lives of children, the negative effects of a father's absence, the various variables that impede paternal involvement, and the possible interventions or replacements for fathers in the lives of children. Although many impeding factors have been identified, little research has been done to find a possible intervention. According to the research consulted in this review, there is a limited amount of buffers for decreased paternal involvement. Future research should be conducted to discover more effective possible buffers, or to find a therapeutic method that more effectively increases father involvement.*

The quality of parenting received by children is a critical factor in determining the probability of future behavioral problems in children in their early years and during their development into adulthood (Jain, Belsky, & Crnic, 1996; Perrin, Baker, Romelus, Jones, & Heesacker, 2009). As a result of this knowledge, mothering has been a topic of researchers for years; fathering, however, seems to have been understudied in the past as an intervening variable between children and their behavioral problems (see Mezulis, Hyde, & Clark, 2004). There have been many trends in the United States recently that have reduced the number of biological fathers in the homes of their children. Many variables influence the amount of time that fathers spend in their children's lives, which could possibly affect a child's risk for future behavioral maladjustment (Fagan, Palkovitz, Roy, & Farrie, 2009).

Because of this shift in paternal involvement, its possible implications, and the lack of research in the past, fathering has been the subject of many recent studies (e.g., Day & Padilla-Walker, 2009; Mezulis et al., 2004).

These studies have examined a wide variety of variables, including ethnicity (Cabrera, Mitchell, Ryan, Shannon, & Tamis-LeMonda, 2008), nonresidency (Fagan & Palkovitz, 2007), paternal depressive symptoms (Reeb & Conger, 2009), and different methods of fathering (Flanders, Leo, Paquette, Pihl, & Séguin, 2009; Jain et al., 1996). These recent studies have individually observed the various effects of fathering and paternal involvement in the lives of infants and adolescents.

With the wide variety of recent literature available, this review provides a broader perspective on the research regarding the effects of fathering on children from the early years of a child's life extending to the time in which the child enters college. It will then explore the complications that are likely to arise without a father in a child's life, and the factors that impede paternal involvement. Finally, this paper will investigate potential buffers or replacements for paternal involvement, and preventative actions that families can take to keep fathers appropriately involved in the lives of their children.

The Positive Effects

In the earliest stages of an infant's life, the various styles of fathering play an integral role in the development of the child. According to Jain et al. (1996), there are four primary fathering styles. Each of these styles affects infants in different ways, but the fathering role that most likely yields the most positive results is a blend between the playmate-teacher and the caretaker (Jain et al., 1996). The role of a playmate-teacher was associated with a high degree of playtime and teaching activities. The role of a caretaker has been defined as a father who was highly engaged in activities such as feeding, dressing, and providing for the child. The fathers in these two categories had a high amount of positive feelings towards the infant and towards their roles as fathers (Jain et al., 1996). This

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blend of fathering roles has been shown to decrease infant behavioral problems, to increase the infant's prosocial behavior, and to increase the infant's future academic achievement (Mezulis et al., 2004).

For example, Flanders et al. (2009) performed a study in which the role of the playmate-teacher was scrutinized for its effectiveness. They studied a particular form of physical interaction between children and their fathers known as rough-and-tumble play (RTP), which is distinguished by periods of wrestling, chasing, and other physical activities during play time. Mothers do not normally engage in as much RTP as fathers do; therefore, RTP is a unique aspect in which fathers are able to influence their infants regarding their positive behavioral and emotional outcomes (Jain et al., 1996). It was observed that children ages two to six who engaged in RTP with their fathers were more socially competent with their peers at school and were less likely to develop externalizing behavior problems. However, the researchers also exposed a potential risk factor in playmate-teacher fathers. If the father during RTP let the child control the intensity or frequency of RTP instead of the father, the child was at risk to become more physically aggressive towards his or her peers, which also increases the risk for chronic psychopathology later in life. Therefore, the need to care for and play with the child is essential in the development of infants (Jain et al., 1996), but it is important to teach young children social boundaries and self-control (Flanders et al., 2009).

The positive effects of fathers on children do not stop after a child's infancy. It has been observed that parents who help a child find solutions to problems instead of solving problems for them, and who give their child positive feedback have children who are more likely to respond positively to learning experiences (Brody, Pillegrini, & Sigel, 1986). However, until a recent study performed by McBride, Dyer, Liu, Brown, and Hong (2009), the extent to which fathers uniquely influenced their children's academic performance was unknown. McBride et al. observed that parents who established a pattern of high involvement in their children's schoolwork during preschool and kindergarten were still involved in their children's schoolwork later in their academic career. This pattern of high involvement was positively correlated to improved student achievement.

However, a father's increased involvement in a child's schoolwork had a unique impact on their academic achievement. The more fathers were involved in the academics of their child, the worse the child performed in school. This does not necessarily mean that the paternal involvement caused the poor academic performance by

the child. A negative correlation could be explained by the fact that fathers become more involved in their children's schoolwork because their children are performing poorly in school (McBride et al., 2009), but limited research has been done to support this hypothesis. There is a limited amount of research regarding whether increased paternal involvement in their child's academic career does yield long-term positive results, or if fathers truly should be less involved in a child's academic career.

However, learning is not limited only to the realm of academics. Fathers are also essential in helping their children learn how to solve interpersonal conflicts. Children are more responsive to a father's constructive conflict resolutions between the father and mother (Goeke-Morey & Cummings, 2007). Children learn how to resolve conflicts by observing their fathers' conflict resolution strategies. The ability to resolve conflicts becomes more important as the child enters adolescence. Adolescents begin having more emotional interactions between themselves and their peers than they did in preceding years. As a result of this increase in emotional interaction, appropriate conflict resolution strategies become more frequently implemented (Goeke-Morey & Cummings, 2007).

A father's interaction continues to be a significant variable as the children grow older. A close father-adolescent relationship has been proven to reduce negative externalizing behaviors and increase positive internalizing behaviors (Day & Padilla-Walker, 2009), thus making the adolescents more socially adept. By the time that children become undergraduates, the extent to which fathers uniquely influenced their children emotionally, cognitively, and behaviorally in a positive manner was quite extensive. According to self-reports by a group of undergraduate students, increased paternal involvement is associated with the appropriate development of gender identity, of self-esteem, of individuality, and of morality (Perrin et al., 2009). Therefore, it can be determined that fathers are uniquely influential in the development of their children.

The Negative Effects of a Father's Absence

If fathers are uniquely important in the development of a child, then the absence of fathers would present many adverse effects in the life of a child. In addition to the lack of the aforementioned benefits of paternal involvement,

reported negative effects of a father's absence in a child's life, whether emotional or physical, include higher dropout rates among high schools, higher rates of teenage pregnancies, unemployment, incarceration, and clinical psychopathology (Flanders et al., 2009; Perrin et al., 2009; McBride et al., 2009).

A low level of paternal involvement results in a much larger risk for adolescent females than adolescent males. In a study performed by Reeb and Conger (2009), gender was studied as a variable regarding how adolescents respond to various levels of paternal involvement. They found that adolescent females are much more affected than adolescent males when the father-child relationship lacked closeness. In fact, these females were much more likely to display a significant increase in depressive symptoms and emotional vulnerability as a result of a lack of paternal involvement. Thus, decreased paternal involvement presents a significant risk in the lives of children.

Variables that Impede Paternal Involvement

As a result of this risk, potential variables that may decrease paternal involvement should be identified and avoided if possible. Gender has been a major factor in the amount of father-child involvement, with fathers being shown to spend more time with their boys than their girls, even in the children's infancy (Jain et al., 1996; Rouyer, Frascarolo, Zaouche-Gaudron, & Lavanchy, 2007). Ethnicity has also been theorized as a possible variable, although Cabrera et al. (2008) have proven that ethnicity is not a significant variable when fathers of the same socio-economic class are considered.

This and other related studies resulted in what is known as the resource theory, which means that fathers who have more resources, such as time and money, are more likely to be involved in their children's lives (Cabrera et al., 2008). A study by Jain et al. (1996) supports this theory. They found that fathers who were more involved in their infants' lives were more educated, had a higher income, and had fewer daily stressors. On the other hand, fathers who had lower incomes, were less educated, and had a higher level of daily stressors were significantly less involved with their infants. However, Cabrera et al. (2008) argue that the resource theory may not necessarily be correct. They found, after controlling for income, age, child gender, and education, that "the fathers' level of resources did not explain the variation in father

involvement" (p. 646). Instead, they proposed that another theory might more fully explain the variance in paternal involvement: the family systems theory.

The family systems theory states that when there are conflicts within the family, paternal involvement is decreased significantly. One common cause of decreased paternal involvement across all of the literature is a negative relationship between the mother and the father of the child (see Fagan & Palkovitz, 2007; Huston & McHale, 1987; Mezulis et al., 2004; Schacht, Cummings, & Davies, 2009). Children have been known to be angrier, to be more fearful, and to display more aggression when there is marital discord between their parents (Goeke-Morey & Cummings, 2007). The health of the relationship between mother and father has been identified as a key factor in a child's mental health (Schacht, Cummings, & Davies, 2009), and it has a direct effect on paternal behavior.

For example, Fagan et al. (2009) explain that the romantic relationship between a father and a mother is a reliable predictor of a father's involvement with their children. This correlation could be explained by a variety of variables, including the mother becoming romantically involved with someone else (Cabrera et al., 2008), the father having multiple children with multiple women (Fagan et al., 2009) and incarceration (Fagan & Palkovitz, 2007). However, these particular risk factors are most commonly present in fathers who are not married or were never married to the mother of their children (Fagan et al., 2009).

There are problems that may arise within a married relationship that affect the amount of involvement fathers have with their children as well. Huston and McHale (1987) performed a study in which they observed paternal involvement in single-earner and double-earner families. Although this study may nearly be 30 years old, it is unique because it studied the differences of paternal behaviors among married couples. Huston and McHale found that dual-earner families are at much higher risk of problems with paternal involvement. In dual-earner families, mothers have a decreased amount of time to take care of their children, so they require more assistance in child rearing from the fathers of these children. Fathers who reported that they felt forced to take upon themselves more childrearing responsibilities reported lower levels of marital happiness. This is possibly explained by the reference group theory (see Hutson & McHale, 1987), which states that dual-earner fathers compare themselves to single-earner fathers and feel inadequate as men to fully provide for their families, even though they may have to

work harder and take upon themselves more childrearing responsibilities. This feeling of inadequacy could lead to marital discord, which could lead to depressive symptoms in the father.

These findings are supported in a study performed by Goeke-Morey and Cummings (2007). Their study focused on the paternal mental health hypothesis, which states that a father's mental health is negatively correlated with the amount of marital discord. This study showed that when fathers display depressive symptoms as a result of marital discord, children are much more affected than they are by a display of the mother's depressive symptoms. The researchers supported the father vulnerability hypothesis, or rather that children are more reactive to a father's depressive symptoms as a result of marital discord because of the children's preconceived notion that fathers are emotionally strong and are the head of the family.

These depressive symptoms and marital discord result in a shift in paternal involvement. For example, fathers have been shown to be more emotionally detached in their children's learning experiences, to perform tasks for their children rather than help them learn how to perform such tasks on their own, and have given their children less positive feedback (Brody et al., 1986). Paternal depressive symptoms have also been linked with minor and major alcohol consumption. These drinking problems have been shown to increase the amount of marital discord within the family, to decrease the father's own level of positive parenting, and to decrease the emotional security in his children, which increases the amount of externalizing and behavioral problems in the child (Schacht et al., 2009). If the marital discord increases depression, which in turn increases alcohol consumption, then the overall effects on the children become more dramatic and the cycle is hard to reverse. This study suggests that certain types of behavior performed by fathers are dangerous to a child's development. More research could focus on fathering behaviors that are detrimental to child development and how to avoid such behavior.

Therefore, the variables that affect paternal involvement are varied, but it seems that a physical presence of the father in the home combined with an emotional absence in his children's lives is also detrimental to a child's development. In cases in which the father either leaves the family or becomes emotionally distant, the family systems theory seems to be the most accurate theory in predicting future paternal involvement.

Replacements or Interventions for a Father's Absence

When looking at what can be done to replace the presence of paternal involvement in the lives of children, the answers are vague. For example, research has shown that when fathers are uninvolved in their children's learning opportunities, mothers can compensate by becoming extra involved, giving the child the positive feedback and motivation. Children have been shown to respond positively to this compensation, asserting that increased mother involvement can yield the same positive results as an average amount of paternal involvement (Brody et al., 1986; McBride et al., 2009).

In contrast, there has also been research that suggests that in the absence of involvement of one parent, the other parent cannot compensate by becoming more involved in the everyday life of the child. The attempt to compensate for a lack of parental involvement has been shown to only diminish the adverse effects of the absence of an uninvolved parent. This compensation cannot yield the positive benefits of both parents' involvement (Day & Padilla-Walker, 2009).

Adversely, compensation on the part of the father has also been shown to cause more harm than good in specific cases. Mezulis et al. (2004) studied a group of non-depressed fathers whose wives were depressed and how the situation affected fathering behavior and child outcomes. Surprisingly, an increase in father involvement as a result of a decreased maternal involvement produced more behavioral problems rather than help reduce them, suggesting that there are behavioral problems that occur in children because of a lack of maternal involvement, despite a father's best efforts to compensate.

The results of these three aforementioned studies seem to contradict one another, suggesting that more research is still necessary to find an answer to what a parent should do if the other parent becomes less involved in their child's life. In fact, many researchers have admitted that there is a lack of research with regards to possible buffers or interventions for decreased paternal involvement (see Goeke-Morey & Cummings, 2007; Schacht et al., 2009). Rouyer et al. (2007) perhaps explain it best: "Despite a lot of research on paternity, answers are still partial, varied, or even contradictory. In certain positions, professionals are left without the necessary guidelines for designing interventions for families" (p. 232).

Conclusion

It is evident that paternal involvement usually yields positive results in the realm of child development. Inappropriate fathering behavior, however, can be unhealthy to a child's development. The absence of a father can be extremely dangerous, increasing a number of risk factors in children. There are many variables that could impede a father from being involved in his children's lives. The family systems theory is the most likely source providing an accurate, overarching explanation of why fathers could become less involved with their children.

This review has examined the fact that there has been a large amount of research regarding the positive effects of paternal involvement, the adverse effects of a father's absence, and the variables that impede paternal involvement. However, little research has been done on a possible solution to increase paternal involvement and decrease inappropriate fathering behaviors. Fathers who cannot be as involved as they would like to be in their children's lives have a lack of resources available on possible solutions. The research is very limited with regards to a possible positive therapeutic intervention for uninvolved fathers themselves and their families.

References

- Brody, G. H., Pellegrini, A. D., & Sigel, I. E. (1986). Marital quality and mother-child and father-child interactions with school-aged children. *Developmental Psychology, 22*, 291-296. doi:10.1037/0012-1649.22.3.291
- Cabrera, N. J., Ryan, R. M., Mitchell, S. J., Shannon, J. D., & Tamis-LeMonda, C. (2008). Low-income, nonresident father involvement with their toddlers: Variation by fathers' race and ethnicity. *Journal of Family Psychology, 22*, 643-647. doi:10.1037/0893-3200.22.3.643
- Crouter, A. C., Perry-Jenkins, M., Huston, T. L., & McHale, S. M. (1987). Processes underlying father involvement in dual-earner and single-earner families. *Developmental Psychology, 23*, 431-440. doi:10.1037/0012-1649.23.3.431
- Day, R. D., & Padilla-Walker, L. (2009). Mother and father connectedness and involvement during early adolescence. *Journal of Family Psychology, 23*, 900-904. doi:10.1037/a0016438
- Fagan, J., & Palkovitz, R. (2007). Unmarried, nonresident fathers' involvement with their infants: A risk and resilience perspective. *Journal of Family Psychology, 21*, 479-489. doi:10.1037/0893-3200.21.3.479
- Fagan, J., Palkovitz, R., Roy, K., & Farrie, D. (2009). Pathways to paternal engagement: Longitudinal effects of risk and resilience on nonresident fathers. *Developmental Psychology, 45*, 1389-1405. doi:10.1037/a0015210
- Flanders, J. L., Leo, V., Paquette, D., Pihl, R. O., & Séguin, J. R. (2009). Rough-and-tumble play and the regulation of aggression: An observational study of father-child play dyads. *Aggressive Behavior, 35*, 285-295. doi:10.1002/ab.20309
- Goeke-Morey, M., & Cummings, E. M. (2007). Impact of father involvement: A closer look at indirect effects models involving marriage and child adjustment. *Applied Developmental Science, 11*, 221-225.
- Jain, A., Belsky, J., & Crnic, K. (1996). Beyond fathering behaviors: Types of dads. *Journal of Family Psychology, 10*, 431-442. doi:10.1037/0893-3200.10.4.431
- McBride, B. A., Dyer, W. J., Liu, Y., Brown, G. L., & Hong, S. (2009). The differential impact of early father and mother involvement on later student achievement. *Journal of Educational Psychology, 101*, 498-508. doi:10.1037/a0014238
- Mezulis, A. H., Hyde, J. S., & Clark, R. (2004). Father involvement moderates the effect of maternal depression during a child's infancy on child behavior problems in kindergarten. *Journal of Family Psychology, 18*, 575-588. doi:10.1037/0893-3200.18.4.575
- Perrin, P. B., Baker, J. O., Romelus, A. M., Jones, K. D., & Heesacker, M. (2009). Development, validation, and confirmatory factor analysis of the father hunger scale. *Psychology of Men & Masculinity, 10*, 314-327. doi:10.1037/a0017277

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- Reeb, B. T., & Conger, K. J. (2009). The unique effect of paternal depressive symptoms on adolescent functioning: Associations with gender and father-adolescent relationship closeness. *Journal of Family Psychology, 23*, 758–761. doi:10.1037/a0016354
- Rouyer, V., Frascarolo, F., Zaouche-Gaudron, C., & Lavanchy, C. (2007). Fathers of girls, fathers of boys: Influence of child's gender on fathers' experience of, engagement in, and representations of paternity. *Swiss Journal of Psychology/Schweizerische Zeitschrift Für Psychologie/Revue Suisse De Psychologie, 66*, 225–233. doi:10.1024/1421-0185.66.4.225
- Schacht, P. M., Cummings, E. M., & Davies, P. T. (2009). Fathering in family context and child adjustment: A longitudinal analysis. *Journal of Family Psychology, 23*, 790–797. doi:10.1037/a0016741