R U OK? DETERMINING THE EFFECTS OF PARENTING THROUGH INFORMATION AND COMMUNICATION TECHNOLOGIES (ICTS) IN FIRST YEAR UNIVERSITY

by

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Abstract

In recent academic discourse and pop culture, the “helicopter parent” has created some controversy. The majority of the discourse regarding this type of childrearing argues that these parenting techniques may interfere with the development of independence and autonomy of the child (Hoffman, 2010; Padilla-Walker & Nelson, 2012; Ringheim 2014). Some connect characteristics of helicopter parenting with the development of information and communication technologies, or ICTs, which allows for frequent contact and monitoring between parent and child, and which connects well to the sociological concept of the “risk society” (Beck, 1992; Giddens, 1999; Lee, Macvarish & Bristow, 2010; Ledbetter, Heiss, Sibal, Lev, Battle-Fisher & Shubert, 2010; Nakayama, 2011). Much of the literature about helicopter parenting is focused on young children, and there is a great lack of research regarding helicopter parenting in the university setting (Day & Padilla-Walker, 2009; Gar & Hudson, 2008). Exploring the implications of this parenting in university students is critical as the young adults are expected to develop autonomy, to enter the workforce and become functioning members of society. This research employs a quantitative approach, and found that first year university students who have higher ratings of parental control have greater chances of also rating low self-perceived independence. Arguably, this research is significant because such understandings can lead to policy change in the university setting, as well as generally helping to understand parenting techniques in the post-modern age.
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In recent years, pop culture and academic culture alike have increasingly engaged in discussion concerning the social and political controversy of the “helicopter parent.” Helicopter parenting has many specific definitions but is generally defined as a parent being highly involved, protective, and affectionate with their children (Padilla-Walker & Nelson, 2012). While reactions to this phenomenon are mixed, there is a visible contemporary social critique of helicopter parenting, which argues that it interferes with the development of independence and autonomy of the child (Hoffman, 2010; Ledbetter, Heiss, Sibal, Lev, Battle-Fisher & Shubert, 2010; Padilla-Walker & Nelson, 2012; LeMoyne & Buchanan, 2011). Such reactions are arguably connected to a Western discourse that values individualism and autonomy, but further, the parenting style itself can be seen as related to the sociological concept of the “risk society” in Western culture (Beck, 1992; Giddens, 1999; Hoffman, 2010; Lee, Macvarish & Bristow, 2010). That is, a core part of the concept of the risk society is the use of science and technology in our post-modern society, which allows for a vast amount of knowledge about the world, but this creates a discourse regarding risk and how to control it (Beck, 1992; Giddens, 1999; Lee et al., 2010). Helicopter parenting is arguably a kind of “resilience” parenting, which tries to control and mitigate risk to the child (Hoffman, 2010). Further, connections have been made between this concept of “over-parenting” and developments of information and communication technologies, or ICTs, which allow for frequent contact and monitoring between parent and child (Ledbetter et al., 2010; Nakayama, 2011; Ramsey, Gentzler, Oberhauser, & Westerman, 2013). This allows us to ask whether helicopter-parenting methods, that would arguably utilize ICTs to aid their parenting style, have a negative effect on the development of a child’s independence and autonomy (Ledbetter et al., 2010; Padilla-Walker & Nelson, 2012; Ramsey et al., 2013).
Much of the research on “helicopter parenting” identifies the potential effects on young children, but the effects of helicopter parenting can also be seen in young adults (Day & Padilla-Walker, 2009; Gar & Hudson, 2008; Padilla-Walker & Nelson, 2012; Schiffrin, Liss, Miles-Maclean, Geary, Erchull & Tashner, 2013). Such research is particularly significant, especially with society’s view of university as a catalyst for growth and independence in young adults (Vinson, 2013; LeMoyne & Buchanan, 2011). Arguably, the development of autonomy in university students is crucial as they prepare to enter the workforce and become functioning members of society, but regardless of whether the young adult is away at university, or goes to university near home, the parents and the children can be in frequent contact through ICTs, questioning the students’ independent development.

I have seen helicopter parenting in action in the university setting for the past four years, through my part-time job working at the front desk of a residence on campus. Further, I am interested in understanding whether helicopter parenting, which arguably uses ICTs to aid their parenting, has a negative effect on the development on a student’s independence and autonomy. Greater understandings of this topic could lead to policy change in the university setting as well as generally helping to understand parenting techniques in the post-modern age (Vinson, 2013). Thus, the research question for this thesis is: How do young people’s experiences of parenting via information and communication technologies (ICTs) as they begin university affect the development of their independence and autonomy? And further, in light of the attention towards the phenomenon of helicopter parenting, how do students who experience helicopter parenting perceive their independence?

This question was answered by administering an online survey to first year university students at Dalhousie University and King’s College, gathering information about students’
received parenting styles, family ICT use, and self-perceived independence and autonomy since beginning university. The survey is based on previous psychological and sociological research to operationalize these concepts for testing (Baumrind, 1967; Hoffman, 2010; Ledbetter et al., 2010; Maccoby & Martin, 1983; Nakayama, 2011; Padilla-Walker & Nelson, 2012; Ramsey, et al., 2013). To begin, this paper will draw on theories and concepts regarding different types of parenting (including helicopter parenting), the sociology of the “risky environment” by Ulrich Beck (1992) and Anthony Giddens (1999), the concept of “resilience” parenting (Hoffman, 2010), ICTs in the post-modern age (Ledbetter et al., 2010; Nakayama, 2011; Ringheim, 2014) and independence in university (Chow & Healey, 2008; Clinciu, 2013; Vinson, 2013).

**Literature Review and Theoretical Framework**

**Parenting Types**

This section will describe the different models of parenting proposed by social scientists over the years, and will identify a model that will be used for this thesis. Darling and Steinberg (1993) defined parenting style as the overarching emotional climate a parent creates for socialization, and parenting practice as the intentional behaviours that respond to specific goals for socialization. Parenting styles and practices are not heavily situated in sociological theories, but psychological theories on parenting date back to Baumrind (1967, 1971), who identified three types of parenting: authoritative, authoritarian, and permissive (Baumrind, 1967, 1971).

*Authoritative* parenting is defined as parenting that is high in warmth and demand, sets clear limits for the child, encourages compliance, and uses reasoning to explain the rules (Baumrind, 1967, 1971). *Authoritarian* parenting is identified as high in control and low in responsiveness, with a value placed on obedience and strict rules. In addition, authoritarian parents restrict the autonomy of the child, are low in warmth, have absolute standards, and use punitive discipline tactics (Baumrind, 1967, 1971). *Permissive* parenting is characterized by low control of the
child, but high responsiveness, thus these parents make few demands, allow the child to regulate their own actions, and react in accepting and nonpunitive ways to their child’s impulses (Baumrind, 1967, 1971).

To extend these theories, Maccoby and Martin (1983) adapted these categories along two dimensions of parenting, namely parental support and parental control (also termed parental responsiveness and parental demandingness, respectively). These dimensions are illustrated in Figure 1. Authoritarian parenting is placed on high control and low support; authoritative parenting is placed on high control and high support; and permissive parenting is placed on low control and high support (Maccoby & Martin, 1983). They added a fourth category called uninvolved or laissez-faire parenting that represents low control and low support (Maccoby & Martin, 1983). This is the framework that this thesis will utilize, or adapt.

*Figure 1. Parenting styles framework (based on Baumrind, 1967, 1971; Maccoby & Martin, 1983).*
These theories can be criticized for their lack of inclusion of the child’s reactions and impacts on the relationship. They attribute parenting style only to the parents’ internal attitudes and attributes rather than as patterns of interaction with the child that characterize the nature of the relationship and the type of parenting (Takeuchi & Takeuchi, 2008). While these frameworks effectively categorize types of parenting, there may be need for revisions because changes in contemporary society are potentially altering parenting and society’s concepts of parenting types. An example of this is the phenomenon of “helicopter parenting.”

**Helicopter Parenting**

“Helicopter parenting” has recently been in the scope of the popular media and the academic world alike. The term refers to childcare involving “hovering” or micro-managing a child, with the potential of over-involvement in the child’s life (Lemoyne & Buchanan, 2011; Padilla-Walker & Nelson, 2012; Vinson, 2013). In a study by Padilla-Walker and Nelson (2012), 438 undergraduate students and at least one of their parents were questioned about psychological control (intruding and manipulating thoughts, feelings, and attachment) and behavioural control (regulation and structuring of the behavioural world). Specifically, the researches measured parental warmth, involvement, and autonomy granting with their children (Padilla-Walker & Nelson, 2012). They predicted that helicopter parents would be positively correlated with warmth and involvement, but negatively associated with autonomy granting, and proved this hypothesis true (Padilla-Walker & Nelson, 2012). They measured helicopter parenting through five items that measured the degree to which parents make important decisions for their children (e.g. “My parent makes important decisions for me,” on a scale of one (not at all like me/him/her) to five (a lot like me/him/her). Overall, they reiterate that while a lack of autonomy granting by parents may not necessarily be destructive to their child’s growth, it is certainly not
conducive, particularly in young adulthood when autonomy becomes critical (Padilla-Walker & Nelson, 2012).

Reviewing these works on helicopter parents, one can attempt to situate such parenting in the models of parenting styles outlined above. Following Baumrind (1983), helicopter parenting may actually be a blend of authoritative, authoritarian, and permissive parenting. Helicopter parents take the high warmth and demand of authoritative parents, the high control of authoritative parents, and high responsiveness of permissive parents. In terms of Maccoby and Martin’s (1983) framework, helicopter parents would demonstrate high control and high support, thus situated in the authoritative parenting type section (Figure 1). However, the phenomenon of the helicopter parent does not match perfectly within to parenting models. To fully understand the phenomenon of the “helicopter parent” and how this type of parenting refines or evolves our models of parenting, it is critical to understand the social factors in contemporary society that shape this phenomenon. One such factor may be the concept of the “risky environment” and the anxiety it produces, outlined by Ulrich Beck (1992).
Risky Environments

*Figure 2*: Diagram representing the “risk society” (Beck, 1992; Giddens, 1999). Science helps produce knowledge, which in turn creates the notion of risk. Individuals attempt to mitigate and control risk using ICTs and science.

One social factor leading to helicopter parenting may be the “risk society.” Anthony Giddens (1999) emphasizes the impact of science technology on our material environment, and in our everyday activities. As innovation develops, new technology becomes a part of the core of our lives, and further, we constantly experience life under a scientific light. Ulrich Beck (1992) argues that increasing anxiety about the future generates the notion of risk, which is intertwined with the global economy in contemporary society; we live in an era of high technological and scientific innovation but no one completely understands the global risks and dangers we may face. Science is constantly shifting; one of its core principles is that claims of knowledge can be revised (Giddens, 1999). Every day individuals are subject to this revision and counter-revision
of scientific knowledge as they participate in post-modern society. This has created the “end of nature”, and the “end of tradition”. The end of nature is the transition from being worried about what nature could do to us, to what we have done to nature. The risk society is not more inherently dangerous or hazardous – the middle Ages were hazardous, but no notion of risk is evident during that time (Giddens, 1999). This is because dangers in the middle Ages were experienced as a given, coming from God. This relates closely to the end of tradition – where life is no longer lived as fate, which is called individualization. Through these transformations, we have generated the notion to risk, and further the aspiration to control (Giddens, 1999). These concepts are outlined in Figure 2.

A connection can be made here between helicopter parents, who are (like all of us) part of the risk society, and their use of ICTs to aid their parenting style and further their management of risk with their child’s life. Therefore, the idea of risk is bound up with the aspiration to control, and particularly with controlling the future (Giddens, 1999). Parents are bombarded by knowledge and information about what is good and what is bad for their children, and sometimes this information is conflicting. This is a result of the constant revision of knowledge from scientific research every day. Further, parents may use technology, a critical component of the risk society, (ICTs) to aid in monitoring their child and managing risk around their child.

This concept of the “risk” filled environment can be connected to the ethno-discourse of “resilience parenting,” which resonates with helicopter parents. Diane Hoffman (2010) defines resilience as the counter to risk. She explains how our neoliberal social policy places the management of risk on individuals and families, and the failure to manage risk marks these individuals as a risk to the social order. Thus, there is a neoliberal social agenda that causes parents to mitigate the effects of “risk factors” on their children. This agenda, in the context of
parenting, is one of the most powerful of contemporary cultural and policy norms, and thus, the parent is represented as the central risk manager for their child (Lee et al., 2010). To avoid being ostracized by the risk society and the individuals in it, some parents turn to new media to monitor and excessively regulate their children (Hoffman, 2010; Nakayama, 2011). This obsessive fear over the safety of children and the placement of responsibility on individual parents is where Hoffman’s (2010) theories can be clearly linked to the concept of the helicopter parent.

Childrearing is regarded as a site of political and sociological ideology, and the responsibility placed on the parent, as well as the climate of “inflated risk,” causes parents to micromanage their children’s lives in an effort to protect the child from adverse experiences (to form a “resilient” child) (Hoffman, 2010).

This “resilience” pedagogy is conceptualized and perpetuated in parenting advice literature, which expands the possibilities and acceptance of parental intervention in children’s lives (Luke, 1994). In contemporary society, ICTs assist with the expansion of possibilities of this parental intervention. That is, parents may turn to new media to monitor and excessively regulate their children to avoid being ostracized by the risk society and the individuals in it (Hoffman, 2010). Therefore, using ICTs could alleviate the social pressures of being a “negligent parent.”

Some important and relevant social issues arise with these concepts. Firstly, the concepts of risk and the resilient child are not universal; a cross-cultural perspective of risk and resiliency is lacking, and it is likely that Western, mainstream populations may have different definitions of healthy functioning than other cultures (Hoffman, 2010). Thus, the helicopter parent who attempts to mitigate risk to their child may be specific to Western populations. This leads to the second social issue: the concept of risk and resilience tend to be focused on in WEIRD countries:
that is, in Western, Educated, Industrialized, Rich and Democratic populations (Henrich, Heine & Norenzayan, 2010). In Western societies, popular writing about resilience in children tends to be directed to middle to upper class, educated parents (Hoffman, 2010). In risk societies, the middle classes detach themselves from public provision, and some argue they have the right to do so as the public provision has a different interpretation and situation of risk (Giddens, 1999). That is, the middle class has a more active orientation to risk management (Giddens 1999). In return, poor families are further marginalized, expected to adopt the dominant mainstream view of healthy functioning in children (Hoffman, 2010). Further, the parents who may be identified as helicopter parents are more likely to be in the middle to upper class, have an education, and thus have a higher socio-economic status (Hoffman, 2010). Lastly, it becomes clear that resilience parenting is socially constructed and negotiated in political and cultural contexts (Hoffman, 2010). The consumers of resilience pedagogy are more often those with a social advantage, and the pedagogy itself becomes a part of a strategy to manage social and individual difference, and to conform individuals and families into the larger social order (Hoffman, 2010; Luke, 1994). These issues are raised to provide some insight into the concepts, but investigating them is beyond the scope of this project.

It is clear that in the risk culture of contemporary society parents are encouraged to pedagogically control resilience in their children, leading to opportunities for parental intervention in the daily lives of their children (Hoffman, 2010; Luke, 1994). Failure to control and instigate resilience implies a parent is neglectful or not capable of effectively childrearing, and further, is a risk to the social order (Hoffman, 2010). To avoid being ostracised by society, many parents may be turning to new media to monitor their child in this risky environment.
Information and Communication Technologies (ICTs)

The use of ICTs to monitor children brings into question post-modern parenting techniques in our “risk averse” culture, which can potentially lead to controversy, including disputes regarding privacy rights (Ringheim, 2014). An example of a post-modern parenting technique using ICTs are applications that can be downloaded onto smart phones that assist parents in monitoring their children. One such app is called “TeenSafe,” with its motto: “protecting your most valuable treasure” (Jain, 2014). This app allows parents to “view text messages and deleted text messages, monitor your teen’s iPhone location, review web browsing, bookmarks and search history, and monitor contacts and call logs” (Jain, 2014). On the FAQ on their website, one question asks “Does my teen need to know I’m using TeenSafe?” and holds the following answer, “No. As long as you are the parent or legal guardian, and the child is under the age of 18 years old – you are legally allowed to monitor your child’s activity without informing them” (Jain, 2014). This brings to light the concerns that parents have in contemporary society of protecting their children, mitigating risk and harm, and attempting to build resilience in their child (Hoffman, 2010; Lee et al., 2010). Some would argue that such uses of ICTs are an invasion of their child’s privacy and a perversion of established child-parent trust.

Nakayama (2011) identifies how a rise in parents’ fear for their children’s safety and a decline in perceived safety in society causes implementations of many preventative anti-crime approaches such as constant monitoring. He measured the association between parenting style and the intention to use monitoring information technology such as GPS and RFID (Radio Frequency Identification Devices), which identify the location of an individual. Nakayama (2011) administered surveys with both parents and children, who reported on control and responsiveness of the parents. Results indicated that a high parent self-report of control was
correlated with a higher intention to use a monitoring system such as GPS or RFID (Nakayama, 2011). This relates to the study by Padilla-Walker and Nelson (2012), as they identify how helicopter parents are more controlling, and these could potentially be the parents that would use monitoring systems on their children such as GPS and RFID (Nakayama, 2011).

While the “Teensafe” app and using GPS or monitoring technologies seem like extreme kinds of parenting, there are more discreet ways of monitoring children. Unfortunately, much of the literature regarding parental use of ICTs is skewed towards mothers with young children (Day & Padilla-Walker, 2009; Gar & Hudson, 2008). In contrast, there is some evidence regarding the connection between parenting and ICT use in university but it is not extensive (Ledbetter et al., 2010; Ramsey et al., 2013). Some evidence suggests that young adults may simply be choosing to be in frequent contact with their parents, and parents may use technology in more discreet ways than monitoring technologies such as Teensafe to oversee their children (Jain, 2014; Ledbetter et al., 2010; Ramsey et al., 2013). Specifically, it has been found that face-to-face contact and phone contact is still frequent for parents and the university students, while e-mailing has decreased over time and text messaging and SNS (social networking sites) has increased over time (Ramsey et al., 2013). These changes may be linked to the concept of the helicopter parent; however, this link is not clear and there is still a lack of literature regarding parental use of ICTs, especially in the university context. This is surprising considering ICTs themselves itself could be utilized to collect this information, such as through online surveys. Such research would greatly assist in understanding how helicopter parents use ICTs, particularly in universities. This is of particular importance as first year university is viewed by society as a time to gain independence to function well in contemporary society.
Independence in First Year University

Moving away for university is a great life transition, as it calls for identity formation and greater independence on the young adult, and high levels of autonomy granting by the parent (Chow & Healy, 2008; Schiffrin et al., 2013; Vinson, 2013). Chow and Healey (2008) outline how “home” holds social, cultural and historical significance for people, as well as profound psychological meanings. Physically distancing the self from “home” by moving to another area for university causes social and symbolic distancing from these meanings and from the existing social support networks from family and friends. Some young adults experience a form of displacement, as they have left an area and source of safety and identity, while other young adults transition well to their new life by forming new social networks and identities (Chow & Healey, 2008). A good transition to first year is identified in another study as independent functioning in the ability to negotiate a new, complex world, developing motivation for learning, having good time and money management, and having the ability to keep up with assignments and attend classes (Clinciu, 2013). When this occurs, parents may feel that their role and importance in their child’s life is diminished as their child takes significant steps towards independence, which may be a reason to use ICTs to keep in constant contact (Friedlander, Reid, Shupak, & Cribbie, 2007). If such parents are arguably helicopter parents, then they are encouraging dependence of the child on the parent, and counteracting the concept of university as a lesson in autonomy (LeMoyne & Buchanan, 2011; Vinson, 2013).

Upon reviewing the literature, it is clear that there may be some critical connections between parenting types, parents’ use of ICTs, and the effects this has on independence in first year university students. Studying the effects of parenting in young adults is particularly important because of the expected autonomy granting by parents and the learning of skills to
become a functioning member of society (Padilla-Walker & Nelson, 2012; Vinson, 2013). In addition, contemporary society may be hindering the granting of autonomy, because advancement in information technologies are providing easier means for parents to monitor their children and the ethno-discourse of the risk society encourages such behaviour (Beck, 1992; Hoffman, 2010; Lee et al., 2010; Nakayama, 2011). This may result in a generation that is less independent and less able to deal with the many demands that society places on adults.

In light of these issues, this paper’s research question is: How do young people’s experiences of parenting via information and communication technologies (ICTs) as they begin university affect the development of their independence and autonomy? We can drill down this question further to ask: in light of the attention towards the phenomenon of helicopter parenting, how do students who experience helicopter parenting perceive their independence? This research question was explored and answered through a quantitative analysis on self-perceived parenting styles, ICT use, and independence from first year University students at Dalhousie University and King’s College. My hypotheses are grounded in the above literature. I hypothesize that parental control will have a negative association with independence (as parental control increases, self-perceived independence decreases), that parental support will have a positive association (as parental support increases, self-perceived independence increases) and that family ICT use will have a negative association (as family ICT use increases, self-perceived independence decreases). Further, I hypothesize that when holding each of the other variables constant, the coefficients will not change drastically, and that there will be an interaction effect between the independent variables of parental control and parental support. This hypothesis is exemplified in Figure 3.
Methods

A correlational quantitative analysis was conducted to investigate the connections between parenting style, ICTs, and independence in first year university students through the use of an online survey. A correlational design was selected because it investigates the relationship among variables, rather than looking at the differences (Neuman & Robson, 2007; Moriarty, 2011).

Recruitment Apparatus

The nature of the sampling frame for this research question posed some difficulties. An ideal sampling frame would be a full roster or listing of first year university students at Dalhousie University. While this roster exists, the university cannot disclose it. Thus, recruitment occurred through the use of Dalhousie e-mail and course websites. Appendix A is a multi-purpose e-mail that was sent to professors, departments, and societies involved with a first year population. As seen in Appendix A, the e-mail package first included a portion outlining the desire to recruit participants and asked the gatekeeper (course instructor, professor, secretary etc.) to forward the second portion to their e-mail lists. This second portion outlined the purpose of the experiment, the desire to recruit participants, and a link to the survey. Thus, recruitment was conducted by myself, but I depended on gatekeepers to assist in recruitment by forwarding the emails or posting the link on the course website. This recruitment strategy was selected as a solution to the problem of the sampling frame, and for its ease and speed of distribution.

The Sample

The population for this project was students in their first year at university in the 2014-2015 academic year. The total number of participants in my study was 219, but only 193 respondents completed the entire survey. 77.8% of these students were female, and 22.2% were
male. 47.9% of the respondents were aged eighteen, 27.6% were aged twenty and up, 22.9% were aged nineteen, and 1.6% were aged seventeen (Appendix D, Figure 1). The majority of respondents lived on campus in a residence (75%), 10.6% of respondents lived off campus with roommates, 10.1% of respondents lived with their parent or guardian, and 4.3% lived alone (Appendix D, Figure 2).

**Research Instrument**

Information on my variables was measured through the use of an online survey. A survey was selected because it effectively gathers quantifiable data on self-reported beliefs, opinions, characteristics, and past or present behaviours (Neuman & Robson, 2007). This applies readily to the research question, which seeks to gather self-reports of young people’s experiences of parenting via ICTs and young people’s development of independence during university. In addition, several of the psychological and sociological research articles that this thesis builds on use online surveys (Ledbetter et al., 2010; Moriarty, 2011; Padilla-Walker & Nelson, 2012; Ramsey et al., 2013). The survey was administered using the software Opinio. The survey utilized mostly closed-ended questions, such as dichotomous (yes/no), multiple choice, frequency scales, and likert-type scales, but there were some open answer type questions for certain demographic inquiries (Bouma, Ling, & Wilkinson, 2012; Neuman & Robson, 2007). Appendix B outlines the opening page of the survey, which consisted of consent information. Once the participant consented by clicking on the start button, they were brought to the survey itself (Appendix C).

First, there was an eligibility question asking whether the student was in first year. If yes was selected, they went through to the survey, and if no was selected they were brought to the end of the survey. Then there were two questions to identify the student’s living situation and to
identify the one parent/guardian that influenced the student the most. Further, the participants were asked to refer to this selection of the most influential parent/guardian when answering the rest of the survey. This was to help the student be specific when answering the survey questions, because if they were permitted to refer to multiple parent(s)/guardian(s) this may result in confusion (e.g. when asked how controlling their parent is, they may say that their father was controlling but their mother was not, thus giving mixed results). The survey was broken down into four parts: questions about parenting received, questions about family ICT use, questions about self-perceived independence, and lastly, demographic questions. The questions on students’ experience of parenting asked students’ opinions of how involved their most influential parent/guardian is and how controlling the parent/guardian is. This placed the parent/guardian in one of the quadrants of the two axes of controlling and involvement outlined above (Baumrind, 1967; Maccoby & Martin, 1983). Synonyms for the words “control” and “support” used in the literature were used, to have participants answer multiple questions regarding the same variable (Padilla-Walker & Nelson, 2012; Ramsey et al., 2013; Shoup, Gonyea & Kuh, 2009). The questions regarding the students’ experience of ICTs asked how often the student and their parent/guardian used different domains of communication with each other (social networking sites [SNS], text messaging, e-mail, telephone etc.). The questions regarding the students’ self-perceived independence asked about motivation to attend university, involvement of the parent/guardian in university life, as well as direct questions on self-perceived independence when beginning university. The questions regarding demographics asked about gender, age, income, country of birth, region of residence, parent/guardian’s years of education, etc. The full survey can be seen in Appendix C.
Operationalization

**PARENTING STYLE**

Figure 3: Relationship between the independent variable (self-perceived parenting style of the student) and the dependent variable (self-perceived independence of the student). The independent variable is broken down into three sub-variables, being ratings from the students regarding parental control, parental support, and ICT use in the family.

The selected independent variable in my study was the students’ self-perceived experience of parenting. This was broken down into parental control (X1), parental support (X2) and family ICT use (X3), as seen in Figure 3. Arguably, helicopter parents would fall in the “high” categories of each independent variable. Parental control (X1) and parental support (X2) were selected according to the parenting framework outlined above (Figure 1), and the identification of helicopter parents as falling into the high control (demandingness) and high support (warmth) category. In the literature, there are a number of words used to describe these same two categories of parenting (Padilla-Walker & Nelson, 2012; Ramsey et al., 2013; Shoup, Gonyea & Kuh, 2009). Therefore, in the survey, the same likert question was asked (1 being “not at all” and 5 being “extremely”) but each question used a different synonym for “control” and for
“support.” For control, the synonyms selected were “monitoring,” “strict,” and “demanding.” For the support variable, the synonymous words included “warm,” “accepting,” and “involved.” Family ICT use (X3) was selected by asking students to rate how often they phone called their parents, and how often their parent/guardian phone called them since beginning university. Overall, parental control (X1) and parental support (X2) were in the same paradigm, and family ICT use (X3) was an additional paradigm for the independent variable. The selected dependent variable was self-perceived independence (Y). For this variable, I used one question that asked students a likert question of how independent they would rate themselves, with 1 being not at all independent, and 5 being very independent.

**Research Ethics**

Confidentiality was not an issue in this study because no identifying information was gathered so all participants remained anonymous. Risks were no more likely than risks encountered in everyday life in discussing parental relations. Any possible risks were mitigated by explaining the goal of the survey before it is conducted, and also by participants being able to not answer certain questions, in addition to being able to stop the survey. There was no direct benefit of participation, as this study did not offer compensation or other incentives.

**Analysis**

Once the survey was drawn up and administered, a data analysis observed and compared results using a regression analysis and a z-test (Bouma et al., 2012). These tests will cross examine the independent variables of the type of parenting a student undergoes and the amount of ICT use by the student and parent, and the dependent variable of the student’s perceived independence. The data analysis used the Stata Statistics software to cross-examine these variables (STATA, 2014).
Generating variables. The control, support and ICT variables were all created from a number of questions from the survey, by combining the relevant questions to each variable (as explained in the operationalization section). This created an overall score for each respondent along each main variable. Higher numbers referred to those who scored higher ratings, and lower numbers referred to those who scored lower ratings. For example, for the parental control variable, a total of five questions were asked using synonyms for “control,” asking respondents to rate their parent on a scale from 1 (Not at all controlling) to 5 (Extremely controlling). By adding these five questions together, each respondent was given a score out of 20 (by re-working each likert scale response from 0-4). The same method was utilized for the variable of parental support. For the family ICT use variable, two questions asking how frequently the student receives phone calls and how frequently the student phone calls their parent were grouped, resulting in a corresponding score out of 8. The self-perceived independence variable consisted of one likert question asking each student to self-report his or her level of independence, and these responses were collapsed into high and low independence. Therefore, the categories discussed and presented for each variable refer to this created score. The scoring for the parental control variable was left as a continuous variable, due to the scoring being spread from 0 to 20, and not pinpointed in one area, as seen in Appendix D (Table 2). However, for the parental support and family ICT use variables, when observing the distributions there were more people who scored on the higher side of the scales, and thus those variables were collapsed into categories, as seen in Appendix D (Tables 3, 4).
Table 1.

*Analysis Model*

<table>
<thead>
<tr>
<th>X - Parenting</th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>X1</strong> (Parental Control)</td>
<td>Analyze</td>
<td>X</td>
<td>X</td>
<td>Analyze</td>
<td>X</td>
</tr>
<tr>
<td><strong>X2</strong> (Parental Support)</td>
<td>X</td>
<td>Analyze</td>
<td>X</td>
<td>Analyze</td>
<td>X</td>
</tr>
<tr>
<td><strong>X3</strong> (Family ICT use)</td>
<td>X</td>
<td>X</td>
<td>Analyze</td>
<td>Analyze</td>
<td>X</td>
</tr>
<tr>
<td><strong>X1 x X2 + X3</strong> (Interaction Regression)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Analyze</td>
</tr>
</tbody>
</table>

**Model 1**: Parental Control and Self-Perceived Independence  
**Model 2**: Parental Support and Self-Perceived Independence  
**Model 3**: Family ICT Usage and Self-Perceived Independence  
**Model 4**: Parental Control, Support, and Family ICT Usage on Self Perceived Independence (Holding Each Variable Constant with each other)  
**Model 5**: Interaction Effect of Parental Control and Parental Support (Holding Family ICT Usage Constant)

**Rationale of bivariate & multivariate models.** A bivariate analysis was conducted to examine the two-way relationship between each independent (X) variable with the one dependent (Y) variable. More specifically, parental control, parental support, and family ICT use were analyzed with self-perceived independence (Model 1, Model 2, and Model 3, respectively,
as seen in Table 1). Model 4 represents a logistic regression (multi-variate analysis) while holding each of the other variables constant. This is compared to the results in the bivariate analyses (Models 1, 2, 3) and the more similar the results, the more robust my argument. However, when moving forward to such multi-variate analyses, it can be argued that there may be an effect of the parental control variable on the parental support variable. High support (which is a characterization of helicopter parents) may actually lead to increased independence, but to determine if helicopter parents actually decrease independence we need to take into account an interaction effect between parental support and parental control. That is, the negative effects of parental control may “override” the positive effects of parental support on independence. Further, that means that the level of control the parent exerts may condition the effect of parental support. If parental control is low, it will have an interaction with parental support to have a positive impact on a students’ self-perceived independence. If parental control is high, then it will have an interaction with parental support to have a negative impact on a students’ self-perceived independence. Therefore, Model 5 was conducted observe and to test these interaction effects (as seen in Table 1) according to the theoretical framework of parenting styles (Figure 1).

Model 5 examines an interaction effect between the variables of parental control and parental support (while holding family ICT use constant), because they are in the same conceptual model, and further, because of the possible mediating nature of parental control over parental support. There is no conceptual framework that includes all three independent variables, and thus that is why ICT usage is being held constant while testing for an interaction for the other two. This fits well with my research question and the models used in this thesis. Model 5 is also compared to the results in the bivariate analyses (Models 1, 2, 3) and the more similar the
results, the more robust my argument. In addition, an interaction coefficient is examined to report the possible interaction effect between parental control and parental support.

**Results**

**Uni-Variate**

The uni-variate analysis included selecting the variables and observations to be used, deleting the unnecessary observations and variables, and processing each variable in a condition for use (handling invalid responses, collapsing variables into fewer categories, creating labels for variables and values). Basic tables of frequencies and percentages are in the Appendix D (Tables 2, 3, 4, 5). Below are the general distributions of each variable (Figure 4, 5, 6, 7).

*Figure 4.* Parental control distribution. It can be seen that the parental control variable is continuous, as per this line graph, and that most respondents fell in the lower ranges of the parental control scores. This is a negative association (as control score increases, frequency of respondents decreases).
Figure 5. Parental support distribution of respondents. It can be seen that the parental support variable was collapsed into three categories, as per this bar graph, and that most respondents fell in the higher categories of the parental support scores.

Figure 6. Family ICT use distribution of respondents. It can be seen that the family ICT usage variable was collapsed into three categories, as per this bar graph, and that most respondents fell in the higher categories of the family ICT usage scores.
**Figure 7.** Self-perceived independence distribution of respondents. It can be seen that the self-perceived independence variable was collapsed into two categories, as per this bar graph, and that most respondents fell in the high self-perceived independence category (87.56%).
Bivariate Results

Model 1: Parental control and self-perceived independence. Model 1 (Table 2) shows the bivariate analysis between parental control and self-perceived independence. The coefficient is not very high for the parental control variable, however, there is a slight positive support (0.183) for those who across ratings of control having low independence, as seen in Model 1 (n=193). That is, there is a slight positive chance of students rating themselves as low in independence when reporting higher levels of parental control. This means there is a very slight positive relationship between parental control and self-perceived low independence (as parental control ratings increase, self-perceived low independence ratings increase). These results are statistically significant (p<0.01).

Model 2: Parental support and self-perceived independence. Model 2 (Table 2) shows the bivariate analysis between parental support and self-perceived independence. The
coefficients are low across all levels of the parental support scores, in reference to the 0-5 group (reference group), as seen in Model 2 (n=193). The moderate support level group (score of 11-15) has the lowest coefficient (-0.951), and the high support level group (score of 11-15) has a medium coefficient (-0.702), in reference to the lowest support group (score of 0-10). Overall, these are negative coefficients, indicating that the higher the parental support, the lower the chances that a respondent in that group reports low independence (that is, the higher the parental support level ratings, the higher the levels of independence ratings.) However, these results are very close to zero, indicating a very slight negative relationship between these results (as parental support increases, ratings of low independence decreases). In addition, it can be seen that as parental support level increases, ratings of low independence drop quite low, and then climb back up a little bit. Therefore, the highest level of the parental support groups does have higher chances than the moderate level of reporting low independence (in reference to the low parental support group).

**Model 3: Family ICT use and self-perceived independence.** Model 3 (Table 2) shows the bivariate analysis between family ICT usage and self-perceived independence. The coefficients are quite low across the two levels of ICT scores, when regarding the reference group (score of 0-2), as seen in Model 3 (n=193). The middle ICT group (score of 3-5) has the lowest coefficient (-0.882) and the high ICT group (score of 6-8) has the highest coefficient (0.022) in reference to the lowest scoring group (score of 0-2). However, it can be seen that across these two levels, the coefficients fall very close to zero. The negative coefficient for the moderate ICT usage group indicates a lower likelihood of reporting low independence (that is, a higher likelihood of reporting higher independence) in reference to the lowest scoring group. The positive coefficient for the high ICT usage group indicates a higher likelihood of reporting low
independence. Overall, as the ICT usage increases, the chances of reporting low independence first decreases, and then increases. Therefore, the highest level of family ICT usage has the highest likelihoods of reporting low independence (in reference to the lowest family ICT usage group).

**Multivariate Results**

<table>
<thead>
<tr>
<th>Table 3: Logistic Regression (Multivariate) Results</th>
<th>Model 4</th>
<th>Model 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Self-Percieved Independence</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental Control</td>
<td>0.163</td>
<td>0.061</td>
</tr>
<tr>
<td>Parental Support (Score out of 20)</td>
<td>0 to 10</td>
<td>Ref</td>
</tr>
<tr>
<td></td>
<td>11 to 15</td>
<td>-0.769</td>
</tr>
<tr>
<td></td>
<td>16 to 20</td>
<td>-0.630</td>
</tr>
<tr>
<td>Family ICT Usage (Score out of 8)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 to 2</td>
<td>Ref</td>
<td>Ref</td>
</tr>
<tr>
<td>3 to 5</td>
<td>-0.900</td>
<td>0.778</td>
</tr>
<tr>
<td>6 to 8</td>
<td>0.110</td>
<td>0.674</td>
</tr>
<tr>
<td>Control X Support + ICT</td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 to 10</td>
<td>Ref</td>
<td>Ref</td>
</tr>
<tr>
<td>11 to 15</td>
<td>0.137</td>
<td>0.172</td>
</tr>
<tr>
<td>16 to 20</td>
<td>0.108</td>
<td>0.135</td>
</tr>
<tr>
<td>Intercept</td>
<td>-2.442</td>
<td>0.894</td>
</tr>
<tr>
<td></td>
<td>***</td>
<td></td>
</tr>
<tr>
<td></td>
<td>-1.730</td>
<td>1.095</td>
</tr>
<tr>
<td>N</td>
<td>191</td>
<td>193</td>
</tr>
<tr>
<td>Pseudo R2</td>
<td>0.095</td>
<td>0.101</td>
</tr>
</tbody>
</table>

p<0.01***, p<0.05**, p<0.1*

**Model 4**: Parental Control, Support, and ICT Usage on Self Percieved Independence (Holding Each Variable Constant)

**Model 5**: Interaction Effect of Parental Control and Parental Support (Holding ICT Usage Constant)

**Model 4: Effects when holding all variables constant.** Model 4 (Table 3) shows a logistic regression of parental control, parental support, and family ICT usage, while holding all of these variables constant (n=191). This was done to observe the relations between the bivariate and multi-variate analysis and to possibly give more robust arguments if observing similarities
between the levels of analysis (as mentioned above). The coefficient of parental control in this model (0.163) is close to the coefficient (0.183) of the bivariate model (Model 1). That is, holding the parental support variable and the family ICT use variable constant, the parental control variable in this model stays similar to the bivariate model. Although the relation is very slight, the parental control variable in this model is still statistically significant (p<0.01).

The parental support variable in Model 4 has overall very similar coefficients to the bivariate model (Model 2). That is, holding the parental control variable and the family ICT usage variable constant, the coefficients are similar across Model 2 and Model 4. For the moderate parental support group, the coefficient in the bivariate model (-0.951) is similar to that of Model 4 (-0.759), and for the high parental support group the coefficient in the bivariate model (-0.702) is similar to that of Model 4 as well (-0.630), in reference to the low parental support group. However, these results are very slight, as they are very close to zero, and the results are not statistically significant.

The family ICT usage variable in Model 4 also has very similar coefficients to its bivariate model (Model 3). That is, holding the parental control and parental support variables constant, the coefficients for this model are very similar to its bivariate model. For the moderate family ICT usage group, the coefficient in the bivariate model (-0.882) is similar to that of Model 4 (-0.900), and for the high family ICT usage group the coefficient in the bivariate model (0.022) is similar to that of Model 4 as well (0.110), in reference to the low parental support group. However, these results are very slight, as they are very close to zero, and the results are not statistically significant.

**Model 5: Interaction between parental control and parental support (holding family ICT use constant).** Model 5 (Table 3) shows a logistic regression of parental control, parental
support, and family ICT usage, but this time, an interaction effect is observed for parental control and parental support, while holding family ICT usage constant (n=193). This was done to observe the relations between the bivariate and multi-variate analysis and to possibly give more robust arguments if observing similarities between the levels of analysis, in addition to observing a possible interaction or moderating effect of parental control on parental support while holding family ICT usage constant (as mentioned above). A full data table with the bivariate and multivariate analyses is located in Appendix D for easier reference between all models (Table 1). The parental control coefficient in Model 5 (0.083) is not as similar to the bivariate model (0.183) as Model 4 is (0.163). So, when testing for an interaction between parental control and parental support, and when holding family ICT usage constant, the coefficient for the control variable decreases quite a bit, although it remains slightly positive. This more drastic change may be due to the interaction effect between parental control and parental support. The parental control variable in Model 5 is not statistically significant.

The parental support variable coefficients in Model 5 became much more negative. For the moderate support level group, the coefficient went from low, to a bit higher, to much lower, in reference to the lowest parental support level category (-0.951 in Model 2, to -0.769 in Model 4, to -2.000 in Model 5). For the high support level group, the coefficient went from low, to a bit higher, to much lower, in reference to the lowest parental support category (-0.702 in Model 2, to -0.630 in Model 4, to -1.163 in Model 5). So, overall, when testing for an interaction between parental control and parental support, and when holding family ICT usage constant, the coefficient for the parental support variable decreases quite a bit compared to the other models, although it remains negative the entire time. This more drastic change may be due to the
interaction effect between parental control and parental support. The parental support variable in Model 5 is not statistically significant.

The family ICT usage variable coefficients in Model 5 are very similar to Models 3 and 4. For the moderate ICT level group, the coefficients were all negative, and went from low, to a bit lower, and back up to almost the same as Model 3, in reference to the lowest ICT level (-0.882 in Model 3, to -0.900 in Model 4, to -0.810 in Model 5). For the high ICT level group, the coefficients were all positive, and went from low, to higher, and then even higher than both Models 3 and 4, in reference to the lowest ICT level (0.022 in Model 3, to 0.110 in Model 4, to 0.175 in Model 5). So, overall, when testing for an interaction between parental control and parental support, and when holding ICT usage constant, the coefficient for the family ICT usage variable remains quite similar as compared to the other models, remaining negative the entire time for the moderate level group, and remaining positive and increasing slightly for the high level group. However, these results are very slight, as they are very close to zero, and the family ICT use variable in Model 5 is not statistically significant. All of these results are not statistically significant, and therefore inconclusive overall.

When observing the interaction coefficients for parental control and parental support (while holding family ICT use constant) in Model 5, it can be seen that relative to those who have low levels of parental support, the effect of parental control on low independence is greater for the moderate parental support group (0.137) than for the high parental support group (0.108). That is, for both the moderate and high levels of parental support, there is an increase in likelihood of parental control factor’s effect on low independence. These positive coefficients indicate the amount of interaction there is that is changing the effect of parental control and parental support by having that interaction. However, these results are not statistically
significant, and therefore inconclusive overall. Despite this, to exemplify and understand the nuances of this interaction effect, I also ran the predicted probability for Model 4 and Model 5.

Figure 8. Predicted probability for Model 4. The three levels of parental support in relation to parental control, on self-perceived independence (holding family ICT usage at the highest level). This graph exemplifies Model 4, which ran a logistic regression by holding all the variables constant.
Figure 9. Predicted probability for Model 5. The three levels of parental support in relation to parental control, on self-perceived independence (holding family ICT usage at the highest level). This graph exemplifies Model 5, which tested for an interaction effect between parental control and parental support.

Predicted probability. The above two graphs show the predicted probability of Models 4 and 5. It asks how, when we change the value of the parental support level (as shown in the three lines) and the value of the parental control variable (which is across the X-axis), what does that look like on the Y axis? (That is, how do the different support scores and different control scores change the probability that someone reports low independence?) Figures 7 and 8 show that there is a positive correlation. That is, both of these graphs, when looking at the higher parental control
scores, show that higher levels of parental control in all three of the parental support levels (low, medium, high) increase the probability of a student reporting low independence. It can be seen that the lines indicating the different levels of parental support are parallel in the Model 4 graph (Figure 8), but the lines cross in the Model 5 graph (Figure 9). This means that there is an interaction effect occurring between parental control and parental support, while holding family ICT level constant at the highest level. These results are not statistically significant.

**Discussion**

The results of the bivariate analysis for Model 1 (between parental control and self-perceived independence) showed a slight positive relationship (as parental control ratings increase, low self-perceived independence ratings also increase). These results coincide with my hypothesis, and these results are statistically significant (p<0.01), therefore confirming that high parental control ratings are associated with lower ratings of independence.

The results of the bivariate analysis for Model 2 (between parental support and self-perceived independence) showed a slight negative relationship (as parental support ratings increase, low self-perceived independence ratings decrease). That is, the higher the parental support level ratings, the higher the levels of independence ratings. These results do not coincide with the hypothesis that as parental support ratings increase, self-perceived independence decreases. However, these results are not statistically significant, and therefore are inconclusive overall. Therefore, there is a lack of support for the hypothesis in this thesis as well as for relating helicopter parenting with self-perceived independence in the framework of parental support (Baumrind, 1967; Maccoby & Martin, 1983).

The results of the bivariate analysis for Model 3 (between family ICT usage scores and self-perceived independence) were mixed, but overall, the higher levels of ICT usage showed
higher chances of those respondents rating low independence. These results coincide with the hypothesis that as ICT use increases, self-perceived independence decreases. However, these results are not statistically significant, and therefore inconclusive overall. Further, there is a lack of support for the hypothesis in this thesis as well as for the literature relating family ICT usage to helicopter parenting (Hoffman, 2010; Nakayama, 2011).

The general results of the multivariate analysis for Model 4 (analysis of all the variables while holding each variable constant) showed further support for the parental control variable through the similar coefficients between Model 1 and Model 4, and parental control is also statistically significant here. This lends further support for my hypothesis that higher levels of parental control (which is a characterization of helicopter parents) increases the chance of students reporting low independence, as even when holding the other variables constant, the results remain similar. This also confirms my hypothesis that when holding the variables constant, the coefficients do not change drastically (for parental control). However, the same cannot be said for parental support and family ICT use. The coefficients for the parental support in Model 4 are similar to that of Model 2, lending partial support for my hypothesis that higher levels of parental support (where helicopter parents arguably fall) increases the chances slightly that students will report low independence, as even when holding the other variables constant, the results remain similar in that the high parental support group has higher coefficients than the moderate parental support group. The high parental support group is arguably where helicopter parents would be, so these results coincide with my arguments. However, these results are not statistically significant. Therefore, the results are inconclusive and do not confirm my hypothesis that parental support has a negative effect on independence. The same is said for the family ICT use variable in Model 4. The coefficients for the family ICT use in Model 4 are similar to that of
Model 3. This lends further support for my argument that higher levels of family ICT use increases the chances slightly that students will report low independence, as even when holding the other variables constant, the results remain similar. This provides partial support of helicopter parenting (through a higher use of ICTs) effecting low independence in terms of higher use of ICTs. However, these results are not statistically significant, and therefore inconclusive overall, and do not confirm my hypothesis that family ICT use has a negative effect on a students’ self-perceived independence.

The general results of the multivariate analysis for Model 5 (analysis of an interaction effect between parental control and parental support, while holding family ICT usage constant) were all inconclusive. The results for the parental control variable lends further support for my argument that higher levels of parental control (which is a characterization of helicopter parents) increases the chance of students reporting low independence, as even when holding the other variables constant and when testing for an interaction effect, the results remain similar. However, the variable is not statistically significant, and therefore inconclusive, and unable to support my hypothesis.

The results for the parental support variable in Model 5 lend support for my argument that higher levels of parental support (where helicopter parents arguably fall) increases the chances slightly that students will report low independence, as even when holding the other variables constant, and when testing for an interaction effect, the results remain relatively similar. However, the variable is not statistically significant, and therefore inconclusive, and unable to support my hypothesis.

The results for the family ICT use variable in Model 5 lend further support for my argument that higher levels of family ICT use increases the chances slightly that students will
report low independence, as even when holding the other variables constant, the results remain similar. This provides partial support of helicopter parenting (through a higher use of ICTs) affecting low independence in terms of higher use of ICTs. However, these results are not statistically significant, and therefore inconclusive, and unable to support my hypothesis.

An interaction effect between parental control and parental support is shown through the interaction coefficients in Model 5, and through Figures 6 and 7. This lends support to my argument, that an interaction is possible. If my thesis was correct, then the interaction model (Figure 8, 9) would be statistically significant. If these terms were statistically significant, then that would give a robust conclusion to helicopter parenting having a robust effect on independence. Overall, it is interesting to observe this interaction between variables; the data are essentially showing that this model is possible. However, because of the lack of statistical significance, I cannot conclude that reports of high parental control and high parental support levels lead to low self-perceived independence in first year university students.

Overall, these findings coincide with my hypothesis that the more controlled parenting a child receives, the lower they will rate their independence levels. However, the other parts of my hypothesis (that high support and high ICT use will lead to decreased self-perceived independence reports) were not supported, due to a lack of statistical significance. However, this may be due to a low sample size.

Now, with the findings of this research, we can connect this information to the literature. My findings lend partial support to the parenting style model outlined in Figure 1, in the sense that parental control was found to have a significant effect on ratings of low independence (Baumrind, 1967, 1971; Maccoby & Martin, 1983). This model would have even more support if the interaction effect found between parental control and parental support was statistically
significant, but unfortunately, these results were inconclusive. Further, my findings regarding controlling parenting techniques lend support to Hoffman’s (2010) theories regarding “resilience” parenting. It is clear that there is a neoliberal social policy that places the management of risk on individuals and families, and the failure to manage risk marks these individuals as a risk to the social order. The potential ostracization that can be imposed on those who do not employ resilience parenting, so are potentially deemed negligent, can cause parents to turn to such controlling techniques, which my findings support (Hoffman, 2010; Padilla-Walker & Nelson, 2012). Unfortunately, the lack of statistical significance related to family ICT use in my findings does not support the literature regarding the use of ICTs to aid a controlling parenting style, and it does not support the connections made between ICT use and helicopter parenting in a university setting (Ledbetter et al., 2010; Nakayama, 2011; Ramsey, 2013; Ringheim, 2014). This is particularly interesting considering that the majority of respondents (75%) reported that they live on campus, in a residence, and thus they are away from their parents (Appendix D, Figure 2). However, these findings do give support to the idea that such controlling parenting techniques can lead to lower self-perceived independence in the first year student (Chow & Healey, 2008; Clinciu, 2013; Friedlander et al., 2007; LeMoyne & Buchanan, 2011; Padilla-Walker & Nelson, 2012; Schiffrin, 2013; Vinson, 2013).

Limitations in this thesis are minor and major in scope. The minor limitations are the low sample size, a gender imbalance, and the selections for the ICT variable. This survey had a very low sample size (n=193), and unfortunately, low sample sizes result in low validity, as well as low reliability. The validity and reliability are low in the sense that we cannot draw complete conclusions from this research, and that the research is not consistent or dependent. Thus, overall, this research has low generalizability. There is also a gender imbalance, with 77.8% of
the participants being female. This imbalance itself may be affecting the data because the gender of the children may also be affecting the way they are parented. Lastly, the selection for the ICT variable consisted of only questions regarding phone calls. This method was selected to simplify the statistics of this project. Combining questions for different types of ICTs (phone calls, text messages, social media, etc.) would create noisy data, and is beyond the scope of the project. Further, ICT as a variable is more simply an add-on to the main variables of parental control and parental support.

Major limitations are the distinguishing between correlation and causation, and the nature of quantitative research. It is important to note that correlation does not imply causation. That is, just because a correlation was found between high ratings of parental control and low ratings of self-perceived independence, it does not mean that high parental control causes low self-perceived independence. Merely, there is a slightly higher chance that if someone reports high parental control, that they will also report low self-perceived independence. In addition, quantitative research in general does not allow for much leeway in finding out why people gave the specific answers they gave. The nature of quantitative research is that it gives more breadth about a topic, rather than depth, as qualitative research does.

Conclusion

Overall, I found that those first year university students who rated their parents as high in control were more likely to rate themselves as having low independence. However, my findings only partially supported the idea that first year university students who rated their parents as high in support, or their family as having high ICT use, also were more likely to rate themselves as having low independence. While the direction of effect pointed to these results, the correlation
was not statistically significant, thus being inconclusive. The low sample size may be a factor in this.

My findings lend support to the idea that the risk society is affecting parenting techniques, in the sense that parents employ controlling parenting techniques to mitigate our “risky” environment (Beck, 1992; Giddens, 1999; Hoffman, 2010; Lee et al., 2010; Padilla-Walker & Nelson, 2012). In addition, my findings regarding controlling parenting techniques lend support to Hoffman’s (2010) theories regarding “resilience” parenting. It is clear that there is a neoliberal social policy that places the management of risk on individuals and families, and the failure to manage risk marks these individuals as a risk to the social order. The potential ostracizing that can occur from society, by not employing resilience parenting, and by potentially being deemed a negligent parent can cause parents to turn to such controlling techniques (Hoffman, 2010; Padilla-Walker & Nelson, 2012). Further, these findings give support to the idea that such controlling parenting techniques can lead to lower independence in the first year student (Clinciu, 2013; Friedlander et al., 2007; Padilla-Walker & Nelson, 2012).

It is clear that there may be some critical connections between parenting types, their use of ICTs, and the effects this has on independence in first year university students. As technology advances, becoming smaller, less expensive, and multipurpose, greater use of ICTs seems likely to follow. It is critical that professionals keep up with these advances to utilize technology as tools to enhance learning and family dynamics (Walker, Dworkin & Connell, 2011). Once these matters are examined, we may begin to understand the state of independence in university students in contemporary society. Studying the effects of parenting in young adults is particularly important because of the expected autonomy granting by parents and the student learning skills to further become a functioning member of society, and because much of the research on the
topic is focused on young children (Day & Padilla-Walker, 2009; Gar & Hudson, 2008; LeMoyne & Buchanan, 2011; Ledbetter et al., 2010; Padilla-Walker & Nelson, 2012; Vinson, 2013). In addition, contemporary society may be hindering the granting of autonomy, because advancement in ICTs are providing easier means for parents to monitor their children, and the ethno-discourse of the risk society encourages such behavior (Beck, 1992; Giddens, 1999; Hoffman, 2010; Lee et al., 2010; Nakayama, 2011). If this is the case, it may unfortunately result in a generation that is less independent and unable to deal with the many demands that society places on adults (LeMoyne & Buchanan, 2011; Vinson, 2013).

More broadly, we can begin to ask what affects such factors as the risk society and ICT development have on the parent-child relationship in the post-modern age. Even further, we can ask what the ideal type of parenting is, and begin to question and create discussion on such matters in contemporary society. Further research could create a new framework of parenting that would better fit the phenomenon of the helicopter parent, as well as in conducting similar research with larger sample sizes to get more valid and reliable results. Understandings of this topic can lead to policy change in the university setting as well as generally helping to understand parenting techniques in the post-modern age.
References


Behavioural and Brain Sciences, 33(2-3), pp. 61-83.


http://www.teensafe.com/


Appendices

Appendix A: Recruitment E-mail

(E-mail to gatekeepers e.g. course instructors, professors, secretaries etc.)

Hello,

I am writing to request your assistance in collecting data for my honours thesis project. I am an honours student in Sociology at Dalhousie University. My research investigates: What do first-year students think about their parents’ parenting styles as they begin university? How do students and parents use new communications technologies to keep in touch? Does constant communication with parents affect students' independence? I am seeking research participants who are first-year students at Dalhousie. It would be greatly appreciated if you could forward the information about my study below to any first year students you may know. Please be assured that there is no reward or penalty for assisting me or not in reaching out to potential participants.

Thank you kindly,
Yasmeen Ghebari, B.A.

(The following e-mail can be copied and pasted or forwarded to any first year students)

Hello,

This is an invitation to participate in a sociological online survey through Dalhousie University. This research investigates the following questions: What do first-year students think about their parents’ parenting styles as they begin university? How do students and parents use new communications technologies to keep in touch? Does constant communication with parents affect students' independence? If you are a first year student at Dalhousie you are qualified to participate. There is no reward or penalty for participating or for not participating, and neither I nor your professors will know who participates in the study. The survey should only take about 10 minutes to complete. Please follow the link below to begin the survey.

[https://surveys.dal.ca/opinio/s?s=27009](https://surveys.dal.ca/opinio/s?s=27009)

Thanks in advance!

Yasmeen Ghebari, B.A.
Appendix B: Consent Information at Beginning of Survey

You are invited to take part in research being conducted by Yasmeen Ghebari, an undergraduate student in Sociology/Social Anthropology, as part of my honours degree at Dalhousie University.

As a participant in the research you will be asked to answer 40 questions about your academic experience in first year, your adjustment to university, your life at home, your parents/guardians, you and your parents’/guardians’ use of information and communication technologies (ICTs), as well as some demographic information like your age and gender. The purpose of the survey is to gather data regarding how students and parents keep in touch during the transition to university in order to better understand first year students’ experiences.

The survey should take about 10 minutes. You will not be asked for your name. Only the honours class supervisor and I will have access to the unprocessed information you offer. I will describe and share general findings in a presentation to the Sociology and Social Anthropology Department and in my final honours thesis. Thus, some information on the responses in this survey will be used in the final report and presentations of this honours thesis, but will be shared only in aggregate form (for example, the percentage of students who live at home with their parents).

The risks associated with this study are no greater than those you encounter in everyday life. There will be no direct benefit to you in participating in this research and you will not receive compensation. No class grades or evaluations are linked to your participation. The research will contribute to new knowledge on the experiences of first year university students when transitioning to university. If you would like to see how your information is used, please feel free to contact me and I will send you a copy of my honours thesis after April 30.

Your participation in this research is entirely voluntary. You do not have to answer questions that you do not want to answer, and you are welcome to stop the survey at any time if you no longer want to participate. After the completion of the survey, I will not be able to remove the information you provided as there is no way for me to identify which data belongs to you. However, the information will not be used in any other research.

If you have questions or concerns please contact me, Yasmeen Ghebari (ys686058@dal.ca), or my honours class supervisor, Dr Martha Radice, at the Department of Sociology and Social Anthropology, Dalhousie University on (902) 494-6747, or email martha.radice@dal.ca.

If you have any ethical concerns about your participation in this research, you may contact Catherine Connors, Director, Research Ethics, Dalhousie University at (902) 494-1462, or email ethics@dal.ca.

By clicking on the start button of the survey you consent to participating in the survey,
Appendix D: Opinio Survey

**Parenting in First Year Survey**

1. Are you in your **first year** of your undergraduate degree at Dalhousie or King’s?
   - Yes (Proceed)
   - No (Thank you for your interest in this survey, but you are not eligible for this research)

2. Please check the box that most closely fits your **upbringing**
   - I lived with two parents/guardians
   - I lived with one parent/guardian
   - I lived half the time with one parent/guardian, and half the time with another parent/guardian
   - I lived primarily with one parent/guardian, but lived part-time with another parent/guardian
   - Other: __________
   - Prefer Not to Answer

3. Please indicate the ONE parent/guardian that has had the **most influence** in your life
   - Mother
   - Father
   - Grandmother
   - Grandfather
   - Other: __________

**PLEASE ANSWER THE REST OF THE SURVEY ACCORDING TO YOUR PARENTAL INFLUENCE SELECTION (Question 3)**

4. How **supportive** was your parent/guardian in his/her parenting techniques?
   - Not at all supportive
   - -
   - -
   - -
   - Extremely supportive
   - Prefer not to answer

5. How **controlling** was your parent/guardian in his/her parenting techniques?
   - Not at all controlling
   - -
   - -
   - -
   - Extremely controlling
   - Prefer not to answer
6. Since beginning university, how **supportive** is your parent/guardian in his/her parenting techniques?
   1. Not at all supportive
   2. -
   3. -
   4. -
   5. Extremely supportive
   6. Prefer not to answer

7. Since beginning university, how **involved** is your parent/guardian in his/her parenting techniques?
   1. Not at all involved
   2. -
   3. -
   4. -
   5. Extremely involved
   6. Prefer not to answer

8. Since beginning university, how **warm** is your parent/guardian in his/her parenting techniques?
   1. Not at all warm
   2. -
   3. -
   4. -
   5. Extremely warm
   6. Prefer not to answer

9. Since beginning university, how **accepting** is your parent/guardian in his/her parenting techniques?
   1. Not at all accepting
   2. -
   3. -
   4. -
   5. Extremely accepting
   6. Prefer not to answer

10. Since beginning university, how **controlling** is your parent/guardian in his/her parenting techniques?
    1. Not at all controlling
    2. -
    3. -
    4. -
    5. Extremely controlling
    6. Prefer not to answer
11. Since beginning university, how **demanding** is your parent/guardian in his/her parenting techniques?
   1. Not at all demanding
   2. –
   3. –
   4. –
   5. Extremely demanding
   6. Prefer not to answer

12. Since beginning university, how **strict** is your parent/guardian in his/her parenting techniques?
   1. Not at all strict
   2. –
   3. –
   4. –
   5. Extremely strict
   6. Prefer not to answer

13. Since beginning university, how **limit-setting** is your parent/guardian in his/her parenting techniques?
   1. Not at all limit-setting
   2. –
   3. –
   4. –
   5. Extremely limit-setting
   6. Prefer not to answer

14. Since beginning university, how **monitoring** is your parent/guardian in his/her parenting techniques?
   1. Not at all monitoring
   2. –
   3. –
   4. –
   5. Extremely monitoring
   6. Prefer not to answer

15. Since beginning university, how often do you **send** the following forms of communication to your parent/guardian? (Please check ONE box in each column)
16. Since beginning University, how often do you **phone call** your parent/guardian?
   - Never
   - A Few Times a Year
   - Once a Month
   - A Few Times a Month
   - Once a Week
   - A Few Times a Week
   - Once a Day
   - A Few Times a Day
   - Prefer Not to Answer

17. Since beginning University, how often do you **receive** the following forms of communication from your parent/guardian? (Please check ONE box in each column)
<table>
<thead>
<tr>
<th>Text Messages</th>
<th>Social Media (e.g. Facebook, Twitter, Instagram, Snapchat etc.)</th>
<th>Video Calling (e.g. Facetime, Skype...)</th>
<th>E-mail</th>
<th>Letters/Mail</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Few Times a Year</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Once a Month</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Few Times a Month</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Once a Week</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Few Times a Week</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Once a Day</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Few Times a Day</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Prefer Not to Answer</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

18. Since beginning University, how often does your parent/guardian **phone call** you?
- Never
- A Few Times a Year
- Once a Month
- A Few Times a Month
- Once a Week
- A Few Times a Week
- Once a Day
- A Few Times a Day
- Prefer Not to Answer

19. Since beginning University, how often do you see your parent/guardian **in person**?
• Never
• A Few Times a Year
• Once a Month
• A Few Times a Month
• Once a Week
• A Few Times a Week
• Once a Day
• A Few Times a Day
• Prefer Not to Answer

20. Who motivated you the most to attend University?
• Yourself
• Friends/Peers
• Parent(s)/Guardian(s)
• Other: ____________
• Prefer not to answer

21. When you have a serious problem... (select one)
• You work it out on your own, without help from others
• You consult your friend(s)/peer(s)
• You consult your parent/guardian
• You consult a professional, such as a therapist, college counselor, or religious or spiritual advisor
• Other: ____________
• Prefer not to answer

22. When you have an important decision to make... (select one)
• You work it out on your own, without help from others
• You consult your friend(s)/peer(s)
• You consult your parent/guardian
• You consult a professional, such as a therapist, college counselor, or religious or spiritual advisor
• Other: ____________
• Prefer not to answer

23. How often does your parent/guardian contact University staff to help solve problems you may be having at university?
1. Never
2. Sometimes
3. Often
4. Very often
5. I have not had problems at University
6. Prefer not to answer
24. Since beginning university, how good has your parent/guardian been in granting you **autonomy** over your own life (e.g. giving you choice, reduction of rules, allowing the expression of ideas, avoiding intrusive behaviours...)
   1. Not at all good
   2. -
   3. -
   4. -
   5. Extremely good
   6. Prefer not to answer

25. Since beginning university, how much has your parent/guardian been **involved** in aspects of your life (e.g. they make important decisions for you, they look for jobs or opportunities for you, etc...)
   1. Not at all involved
   2. -
   3. -
   4. -
   5. Extremely involved
   6. Prefer not to answer

26. Since beginning university, how much has your parent/guardian **micro-managed** aspects of your life (e.g. they intervene in settling disputes with family or friends, they solve any crises you may have, etc...)
   1. Not at all
   2. -
   3. -
   4. -
   5. Extremely
   6. Prefer not to answer

27. How would you rate your **academic success** since beginning University?
   1. Not at all successful
   2. -
   3. -
   4. -
   5. Extremely successful
   6. Prefer not to answer

28. How would you rate your **level of independence** since beginning University?
   1. Not at all independent
   2. -
   3. -
   4. -
   5. Extremely independent
   6. Prefer not to answer
Demographics:

29. Age: ________

30. Gender:
   • Male
   • Female
   • Other: ________
   • Prefer not to answer

31. What is the ethnic origin that you identify with? ________________

32. What is your country of birth? ________________

33. What is your parent/guardian’s country of birth? ________________

34. What is your living situation?
   • Off campus, alone
   • Off campus, roommate(s)
   • Off campus, with parent(s)/guardian(s)
   • On campus, residence
   • Other: __________

35. Region of Residence of your parent/guardian? Please answer in the form of [City, Province/State] ________________

36. What is your employment status?
   • Full-Time Employed
   • Part-Time Employed
   • Not Employed

37. What is your personal monthly income including benefits?
   • $__________
   • Prefer not to answer

38. What is your family’s annual income including benefits?
   • No income
   • Under $20,000
   • $20,000 – under 40,000
   • $40,000 – under 60,000
   • $60,000 – under 80,000
   • $80,000 – under 100,000
   • $100,000 or more

39. What is your student enrollment status?
• Full Time
• Part Time

40. What is the highest educational attainment that your parent/guardian achieved?
• Some high school
• High School
• Diploma or Certificate through College
• Some Undergraduate
• Undergraduate Degree
• Professional Degree (e.g. Medicine, Dentistry, Law)
• Masters Degree
• PhD

Thank you for participating in this survey! Please hit “Finish” to submit.
### Table 1: Logistic Regression Results

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
<th>Model 3</th>
<th>Model 4</th>
<th>Model 5</th>
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<tbody>
<tr>
<td>Parental Control</td>
<td>0.183</td>
<td>0.059</td>
<td>***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental Support (Score out of 20)</td>
<td>Ref</td>
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<td>0 to 10</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>11 to 15</td>
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<td></td>
<td>-0.769</td>
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<tr>
<td>16 to 20</td>
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<tr>
<td>Family ICT Usage (Score out of 8)</td>
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<td></td>
<td>Ref</td>
<td></td>
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<tr>
<td>0 to 2</td>
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</tr>
<tr>
<td>3 to 5</td>
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<tr>
<td>6 to 8</td>
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<td>0.608</td>
<td></td>
<td>0.110</td>
<td>0.674</td>
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<tr>
<td>Control X Support + ICT</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>0 to 10</td>
<td></td>
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<td>11 to 15</td>
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<td>16 to 20</td>
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<td>Intercept</td>
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<td>0.020</td>
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</tr>
</tbody>
</table>

p<0.01***, p<0.05**, p<0.1*

Model 1: Parental Control and Self-Percieved Independence
Model 2: Parental Support and Self-Percieved Independence
Model 3: Family ICT Usage and Self-Percieved Independence
Model 4: Parental Control, Support, and ICT Usage on Self Percieved Independence (Holding Each Variable Constant)
Model 5: Interaction Effect of Parental Control and Parental Support (Holding ICT Usage Constant)
Table 2.

<table>
<thead>
<tr>
<th>Parental Control Variable</th>
<th>Freq.</th>
<th>Percent</th>
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<tbody>
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<tr>
<td>18</td>
<td>1</td>
<td>0.48</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>208</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>
Table 3.

| Parental Support Variable | Freq. | Percent  \\
|---------------------------|-------|----------
| 0 to 10                   | 28    | 13.27%   
| 11 to 15                  | 69    | 32.70%   
| 16 to 20                  | 114   | 54.03%   
| Total                     | 211   | 100      |
Table 4.

<table>
<thead>
<tr>
<th>Family ICT Use Variable</th>
<th>Freq.</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 to 2</td>
<td>29</td>
<td>14.01%</td>
</tr>
<tr>
<td>3 to 5</td>
<td>69</td>
<td>33.33%</td>
</tr>
<tr>
<td>6 to 8</td>
<td>109</td>
<td>52.66%</td>
</tr>
<tr>
<td>Total</td>
<td>207</td>
<td>100</td>
</tr>
</tbody>
</table>
Table 5.

<table>
<thead>
<tr>
<th>Self-Perceived Independence Variable</th>
<th>Freq.</th>
<th>Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>High</td>
<td>176</td>
<td>87.56%</td>
</tr>
<tr>
<td>Low</td>
<td>25</td>
<td>12.44%</td>
</tr>
<tr>
<td>Total</td>
<td>201</td>
<td>100</td>
</tr>
</tbody>
</table>
Figure 1. The distribution of age of the participants in this research. It can be seen that most participants are aged 18 (48%) and the least amount of participants are aged 17 (16%).
Figure 2. The percentage of respondents reporting their respective living situations. It can be seen that the majority of respondents live on campus (75%), and thus are not living with their parents.
Appendix E: REB Final Report

Dalhousie University Research Ethics Board
Ethics Review for Continuing Research Involving Human Participants

Annual / Final Report of the Investigator

Please complete the following information and return to:
Research Ethics c/o Dalhousie Research Services
Dalhousie University
6299 South Street, Suite 231
Halifax, NS, B3H 4H6
ethics@dal.ca

<table>
<thead>
<tr>
<th>Principal Investigator (name):</th>
<th>Yasmeen Ghebari</th>
</tr>
</thead>
<tbody>
<tr>
<td>Department:</td>
<td>Sociology and Social Anthropology</td>
</tr>
<tr>
<td>REB file #:</td>
<td>2015-3473</td>
</tr>
<tr>
<td>Project title:</td>
<td>R U OK? Determining the Effects of Parenting Through Information and Communication Technologies (ICTs) in First Year University</td>
</tr>
<tr>
<td>Effective date of original ethics approval:</td>
<td>February 02, 2015</td>
</tr>
</tbody>
</table>

Please answer Question 1, 2 or 3 below (as applicable) and Question 4:

1. STUDY HAS NOT COMMENCED

   Anticipated Start Date:
   Study Cancelled:
   If cancelled, why?

2. STUDY HAS COMMENCED AND REMAINS ACTIVE

   Number of participants recruited to date:
   Anticipated or expected end date of the study:

Please attach a copy of the most recent version of the consent form or letter of information, and any recruitment materials / advertisements used for this study (required to complete the report) (if applicable).

3. STUDY COMPLETED
If the project has been completed (analysis of data is complete), please submit a brief report (maximum 4 pages) stating the conclusions reached during the duration of this project (abstract or publication will be acceptable).

When did the study end? April 20, 2015
How many participants participated? 219

In recent academic discourse and pop culture, the “helicopter parent” has created some controversy. The majority of the discourse regarding this type of childrearing argues that these parenting techniques may interfere with the development of independence and autonomy of the child (Hoffman, 2010; Padilla-Walker & Nelson, 2012; Ringheim, 2014). Some connect characteristics of helicopter parenting with the development of information and communication technologies, or ICTs, which allows for frequent contact and monitoring between parent and child, and which connects well to the sociological concept of the “risk society” (Beck, 1992; Giddens, 1999; Lee, Macvarish & Bristow, 2010; Ledbetter, Heiss, Sibal, Lev, Battle-Fisher & Shubert, 2010; Nakayama, 2011). Much of the literature about helicopter parenting is focused on young children, and there is a great lack of research regarding helicopter parenting in the university setting (Day & Padilla-Walker, 2009; Gar & Hudson, 2008). Exploring the implications of this parenting in university students is critical as the young adults are expected to develop autonomy, to enter the workforce and become functioning members of society. This research employs a quantitative approach, and found that first year university students who have higher ratings of parental control have greater chances of also rating low self-perceived independence. Arguably, this research is significant because such understandings can lead to policy change in the university setting, as well as generally helping to understand parenting techniques in the post-modern age.

4. PROJECT HISTORY
i. Have you experienced any problems in carrying out this project?
   [ ] Yes       [ ] No
   If yes, please elaborate (attach additional pages as necessary).

ii. Have participants experienced any harm as a result of their participation in the study?
   [ ] Yes       [ ] No
   If yes, please elaborate (attach additional pages as necessary).

iii. Has any study participant expressed complaints, or experienced any difficulties in relation to their participation in the study?
[ ] Yes  [ ] No
If yes, please elaborate (attach additional pages as necessary).

iv. Since the original approval, have there been any new reports in the literature that would suggest a change in the nature or likelihood of risks or benefits resulting from participation in this study?

[ ] Yes  [ ] No
If yes, please elaborate (attach additional pages as necessary).

I certify that the above is true and accurately portrays the status of my project with respect to ethical review.

__________________________________________________________
Signature (Principal Investigator)  Print Name

__________________________________________________________
Date

For University Research Ethics Office Use Only

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<tbody>
<tr>
<td>[ ] Consent Form verified (no changes)</td>
<td>[ ] Consent Form not applicable</td>
</tr>
<tr>
<td>[ ] Approved for further 12 months</td>
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<tr>
<td>[ ] Clarification required (see attached). Approval pending.</td>
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</table>

Signature: Date: