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Exploring the Influence of Smartphone Technology within the Context of Marriage: An Intervention Study

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by

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Abstract

The introduction of smartphones and their use into the everyday lives of a significantly large population has changed the way people communicate and interact. The purpose of this study is to examine any possible negative or positive effects smart phone use may have on partner satisfaction and couple-communication within a married/partnered couple. Participants were divided into a control group and an experimental group. The constructs of communication and relationship satisfaction were measured through a repeated-measures design. The Revised Dyadic Adjustment Scale (RDAS) was used to measure relational satisfaction, and the Primary Communication Inventory was used to measure partner communication. Both surveys were administered at the beginning and end of a 2-week intervention period. Couples in the experimental group turned off their smartphones for 2 hours each day. Five constructs were analyzed: the total score of the PCI and the RDAS, and the RDAS's 3 internal constructs of cohesion, satisfaction, and consensus. Five mixed-design ANOVAs were run comparing the 2

groups and measuring any change in the 5 domains. All 5 ANOVAs showed no significant change between the 2 groups after the 2-week intervention. Pearson's correlations suggested that some factors may be related to relationship satisfaction growth, including number of years married/partnered, partner phone communication frequency, and partner perception of partner's smartphone use.

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Chapter 1

Introduction

The rapid development of the internet and its accessibility has provided new ways for individuals to interact occupationally, socially, and relationally. At the start of 2010, 1.9 billion individuals were using the internet. Of those 1.9 billion, an estimated 6% to 13% are addicted to its use at some level (ET forecasts, 2010; Morahan-Martin & Schumacher, 2000). Estimates from 2009 suggest that those who use the internet may spend an average of 7.8 hours per week online (Nielsen Online, 2009). Research has examined the possible effects of increased internet use across a variety of domains, including effects on social and intimate relationships. When examining internet use, research has found a variety of effects and relationships, including increased family conflict, isolation, and social anxiety (Blais, Craig, Pepler, & Connolly, 2008; Lee & Stapinski, 2012; Mesch, 2006; Nie & Erbring, 2000; Valkenburg& Peter, 2007).

The numerous opportunities provided by the internet to its users have become increasingly more accessible via the introduction of the smartphone. While internet users were previously confined to spending time online in segments when they were close to a computer, they now have easy access to the internet at all times. These smartphone devices expand the uses of the typical cellphone (primarily calling and texting) to a device that has internet access and an extremely wide range of capabilities, including social networking, emailing, internet browsing, audio and video media consumption, gaming, and much more. Recent surveys suggest that up to 46% of all Americans now own a smartphone device (Pew Research Center, 2012). Additionally,

new research by Ericsson ConsumerLab (2011) has shown that 35% of smartphone users now use their smartphone before getting out of bed each morning. Among groups that use social networking sites, 18% log in to sites like "Facebook" before ever getting up (Ericsson ConsumerLab, 2011). The average time per day spent on a smartphone by adults has reached a full hour (Nielsen Online, 2014). With so much information now kept in one's pocket and easily accessed, researchers have begun to examine the possible effects such technology may have on an individual across a variety of domains. Some preliminary research has also suggested that the increased use of smartphones may have negative effects. For example, preliminary findings presented by Richard Balding to The British Psychological Society (2012) found that increased smartphone use was positively correlated with an increase in stress levels. However, due to the recency of development of the smartphone, there is still relatively little research in this area.

While research examining smartphone use and marital satisfaction is lacking, studies have been done to examine general cellphone use within marriage relationships. Pew Internet (2008) found that 70% of married American couples who both owned cell phones would contact each other (via phone) at least once per day to touch base or chat. However, research examining links between cellphone use and relational satisfaction have found conflicting results. Earlier research suggested that there was no significant effect of cell phone use upon relationship satisfaction (Emmers-Sommer, 2004). However, later research has shown an increase in relational satisfaction as cellphone communication increased, but a decrease in satisfaction as text messaging increased (Yin, 2009). Miller-Ott, Kelly, and Duran (2012) showed that satisfaction with cellphone use within a relationship was strongly and positively related to relational satisfaction.

Marital relationships are often unique when compared to other relationships because they typically carry a higher level of commitment and intimacy, along with cohabitation. In 2011, alone, there were over two million documented new marriages in the US (Center for Disease Control and Prevention, 2013). Whisman (2001) found a clear association between marital quality and personal well-being when examining the literature on marital relationships. Due to the increasing presence of smartphone technology and subsequent ownership, as well as the link between marital quality and personal well-being, it would be useful to know any possible effects the use of smartphones by married partners may have upon the marital relationship.

Internet Use and Social Relationships

Research studies examining internet use have explained the possible effects it may have on our lives. Because smartphones provide internet access at all times, knowing the influence of internet use is important. Some studies have shown positive effects of internet use are possible. Valkenburg and Peter (2007) discovered that adolescents using instant-messaging over the internet were more likely to have higher levels of well-being and relational quality among friends. It has also been shown that internet users are able to more easily keep contact with family and friends through email and other messaging options (Bargh & McKenna, 2004; Howard, Rainie, & Jones, 2001; Wellman, Haase, Witte, & Hampton, 2001).

However, negative relational effects of internet use, particularly internet use that mirrors addiction criteria per the DSM-IV, have been discovered by various research studies. A longitudinal study by Blais et al. (2008) found that adolescents who used the internet for entertainment over one year experienced a negative impact on the quality of romantic relationships and close friendships. As early as 2000, research has suggested that those who

spend more time on the internet are likely to spend less time with family and friends (Nie & Erbring). Mesch (2006) expanded these results to show that increased time spent on the internet is positively related to family conflict. Lee and Stapinski (2012) recently found problematic internet use (use of a frequent and intruding manner) to be strongly associated with social anxiety with a fairly large effect size, even when controlling for general psychopathological symptoms. Previous studies support this finding as well (Caplan, 2007; Erwin, Turk, Heimberg, Fresco, & Hantula, 2004). Lee and Stapinski (2012) discovered that those with higher social anxiety were choosing to communicate via online methods compared to face-to-face. Other researchers have hypothesized internet use encourages users to pursue online social relationships at the expense of face-to-face interactions (Peters & Malesky, 2008; Selfhout, Branje, Delsing, ter Bogt, & Meeus, 2009; Valkenburg & Peter, 2008).

Smartphones and Similar Devices

Smartphones and the countless forms of entertainment, communication, and information they provide have begun to change the ways we live our lives, according to recent surveys. A survey of smartphone users in the UK by Ofcom (2011) had 37% of adults and 60% of adolescents admit to "high levels of addiction" (p. 4) to their smartphones. 23% of adolescents claimed to watch less TV since getting a smartphone, and 15% claimed to read fewer books. While there is not much research on the possible influences and effects of owning a smartphone, some research has examined how increased connectivity (through smartphone, laptop, etc.) may affect an individual. Middleton (2007) found that having some control over work through increased connectivity can reduce stress and anxiety about work-related issues, and that possessing the ability to stay connected to work, other locations, or individuals can lead to a

feeling of empowerment. For those in the workforce, smartphone users are able to (and do) respond to emails more quickly as well as fit in additional work over small portions of time (Govindaraju & Seward, 2005; Mazmanian, Orlikowski, & Yates, 2005).

While smartphone users do enjoy some positive benefits from the constant connectivity and other options provided, research has shown some negative effects that smartphones can bring. Fenner and Renn (2010) showed that individuals who use forms of technology to work after business hours may experience more work-life conflict. Research has suggested that those possessing smartphones and similar connectivity devices feel more pressure to be accessible and respond to work requests and communication (Mazmanian, Orlikowski, & Yates, 2006; Orlikowski, 2007), resulting in users constantly having their device on and nearby. They engage in behaviors that include regularly checking their device as well as regularly responding to communications. Smartphone users may have some sense of these "accessibility expectations," as 34% of responders to a survey of American smartphone and connectivity device owners agreed with the statement "devices like BlackBerry chain you to work more than they liberate you" (p. 1) (Solutions Research Group, 2007).

Marital Satisfaction

Research has repeatedly shown that there are associations between marital quality and personal well-being, and a meta-analysis of previous research by Helms and Buehler (2007) confirmed a positive relationship between the two, concurrently and over time. The same study found that both gender and length of marriage were significant moderators, which supports some existing hypotheses that men and women experience marriage differently (Bernard, 1972). Additionally, it appears that the relationship between marital quality and personal well-being is

at its strongest earlier in marriage, with the relationship weakening the longer a marriage lasts (Helms & Buehler, 2007). Based upon the reviewed research, it is reasonable to hypothesize that smartphone use could disrupt factors that have been shown to be related to marital satisfaction. Validation and caring have been identified as pillars for maintaining long-lasting relationships (Reis & Shaver, 1988). People also need to know that their partners care about them and can attend to future needs across varying situations (Holmes & Rempel, 1989; Murray, 1999). Friendship has also been shown to be a robust predictor of marital satisfaction (Gottman Relationship Institute, 2012). If persistent smartphone use began to encroach upon these relational aspects, it is likely that the result may be a decrease in overall marital satisfaction.

Research Overview

The goal of this project is to explore the possible effects that smartphone use may have upon partner satisfaction. The study examined whether refraining from smartphone use (by turning off the device) during a set period when a married or partnered couple is together would affect partner satisfaction. It was hypothesized that couples who turn off their smartphones for two hours a day during a period while they are together would experience an increase in positive communication and report more positive experiences, which would increase marital satisfaction, when compared to couples who do not undergo the intervention design.

Chapter 2

Methods

Participants

The sample of participants for this study were individuals currently in a married or partnered relationship who possessed a smartphone. Smartphone was defined as a cellular device that runs a version of iOS (an iPhone) or a version of Android. Participants were primarily recruited through an email sent out at a private, Christian university, though a few were obtained via advertisement on a social network website. An incentive of a $25 gift card drawing was offered to potential participants. Of the potential candidates targeted through the private university population, there was approximately a 2% response rate.

A total of 28 participants completed the study. The demographics (see Appendix A) were gathered during the first survey (pre-test) of the study. Participants ranged in age from 22-51, with a mean age of 34. Participants reported being married/partnered between 1 and 22 years, with a mean of 7 years. 36% of the participants did not have any children, while 50% had 1-2 children and 14% had 3-4 children. When asked to report gender, 46% of participants identified as male, and 54% identified as female. Ethnicities were comprised as follows: 89% Caucasian, 7% African-American, 4% Hispanic. The education level for this sample included 21% with a high school diploma and some college education, 29% with a bachelor's degree, and 50% with a graduate or professional degree. Participants reported the following religious affiliations: 92% Christian, 4% "Other," and 4% as non-religious.

Design

Participants were randomly assigned into one of two groups: a control group and an intervention group. Of the total participants, 20 participants placed in the intervention group completed the study, while 8 participants placed in the control group completed the study. Both groups completed pre-test and post-test surveys at the beginning and end of a 2-week intervention period. Participants were asked to rate their satisfaction with their own smartphone use, their partner's smartphone use, and give an estimate of how much they use their smartphone each week. They were also asked to endorse how they used their smartphones (work, social media, gaming, etc.), as well as whether or not they used a different media device (such as a laptop or a tablet) during the 2-hour intervention period. The intervention group was required to completely shut off their smartphones for a prescribed 2-hour period, once a day. This period took place during a time when the couple was together, usually in the evening hours. Within the intervention group, 36% of the participants successfully shut off their phones for two hours for 11-14 days of the 14-day period; 25% shut off their phones for 8-11 days; and 39% shut off their phones for 7 days or less. The control group did not undergo any intervention. After filling out the post-test measures, the participants were released from the study.

Measures

Marital Satisfaction. Revised Dyadic Adjustment Scale (Busby, Christenen, Crane, & Larson, 1995). The construct of marital satisfaction within this study is defined as the composite score supplied by the results of the Revised Dyadic Adjustment Scale (RDAS). Originally the Dyadic Adjustment Scale (DAS), the RDAS is a revised version that was created by Busby et al. (1995) to be more accurate and efficient. The RDAS measures the constructs of consensus,

satisfaction, and cohesion. The Cronbach's Alpha for the RDAS has been found to be .90 (Busby et al., 1995). For the purposes of this study, the composite score was used to define marital/partner satisfaction, and the construct scores were analyzed separately for additional information. Participants completed this measure during the pre-test and post-test to track potential change in relationship satisfaction.

Communication. Primary Communication Inventory (PCI). Each participant's communication quality with their partner was measured at the beginning and end of the 2-week period with the Primary Communication Inventory (PCI). The PCI is a 25-item self-report instrument that measures both verbal and nonverbal communication between partners. Scores from the PCI have been found to be positively correlated with marital happiness as measured by the Marital Relationship Inventory (Navran, 1967). Higher scores on this measure indicate positive communication practices, and the composite score was used to measure the construct of partner communication for the purposes of this study. The Cronbach's Alpha for the PCI in this study was found to be .834.

Chapter 3

Results

The purpose of this study was to examine the effect that smartphone use may have on married/partnered individuals, specifically their marital satisfaction and communication with their partner. The original hypothesis was that individuals decreasing their smartphone use through the intervention would show an increase in positive communication with their partner and overall marital satisfaction as measured by the Partner Communication Inventory and the Revised Dyadic Adjustment Scale.

Data Analysis

Descriptive statistics, internal consistency, and a mixed-design ANOVA were computed. Eleven participants were eliminated from analysis due to only completing the pre-test surveys and failing to complete the post-test surveys. Two participants were also eliminated due to failing to meet the condition of owning a smartphone. After these eliminations, the complete sample size totaled 28 individuals: 20 were in the intervention group, while 8 were in the control group. Comparative statistics showed no significant difference between the control group and the intervention group per the pre-test surveys. There was a significant difference between mean age and years married/partnered between the two groups, likely due to the small sample size of each group. The mean age for the control group and experimental group was 27.25 and 36.85, respectively. The mean years partnered/married for the control group and experimental group was 3 and 9.15.

A mixed-design ANOVA was used to consider changes in overall PCI scores over time. No main effect was found for the between-groups factor (experimental condition), F (1,26) = 0.09, p = .772, or for the repeated-measures factor (change over time), F (1,26) = 0.64, p = .430. The anticipated interaction effect was not found, F (1,26) = 0.53, p = .472 (See Figure 1).

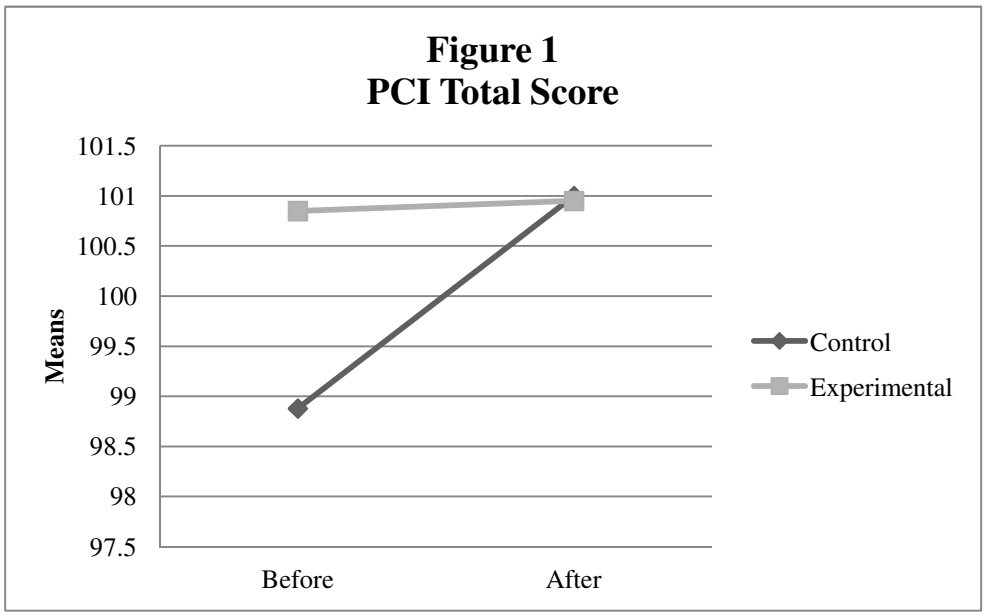

Figure 1. PCI total score.

A mixed-design ANOVA was used to consider changes in overall RDAS scores over time. No main effect was found for the between-groups factor (experimental condition), F (1,26) = 0.16, p = .692, or for the repeated-measures factor (change over time), F (1,26) = 3.69, p = .066. The anticipated interaction effect was not found, F (1,26) = 0.73, p = .401 (see Figure 2).

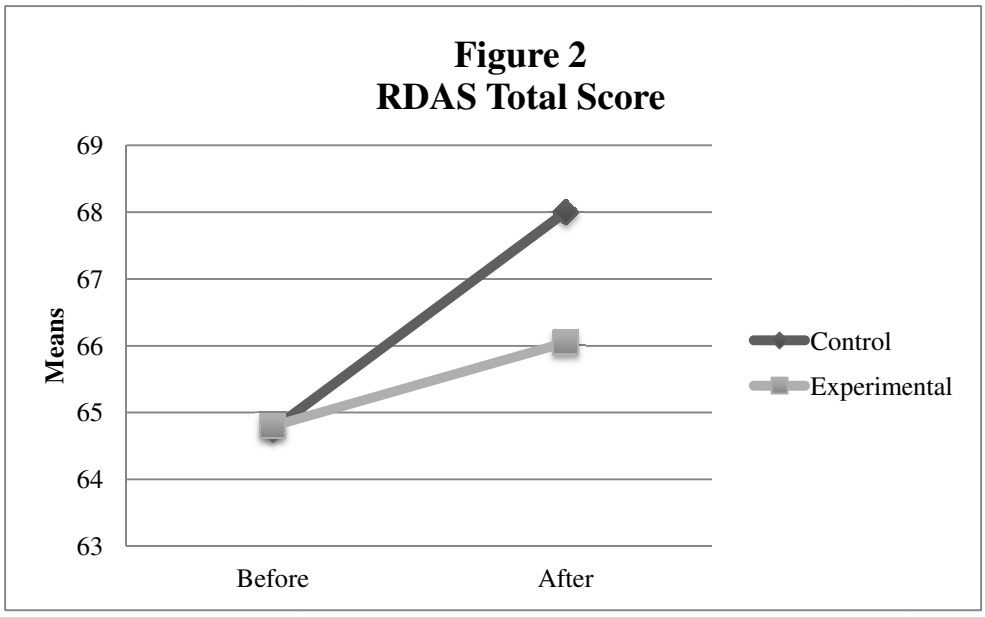

Figure 2. RDAS total score.

The RDAS measure was also analyzed by its three internal constructs: Consensus, Satisfaction, and Cohesion. A mixed-design ANOVA was used to consider changes in RDAS Consensus scores over time. No main effect was found for the between-groups factor (experimental condition), F (1,26) = 0.47, p = .500, or for the repeated-measures factor (change over time), F (1,26) = 1.78, p = .194. The anticipated interaction effect was not found, F (1,26) = 0.79, p = .382 (see Figure 3).

A mixed-design ANOVA was used to consider changes in RDAS Satisfaction scores over time. No main effect was found for the between-groups factor (experimental condition), F (1,26) = 0.01, p = .945. A main effect was found for the repeated-measures factor (change over time), F (1,26) = 5.43, p = .028. However, the anticipated interaction effect was not found, F (1,26) = 0.47, p = .499 (see Figure 4).

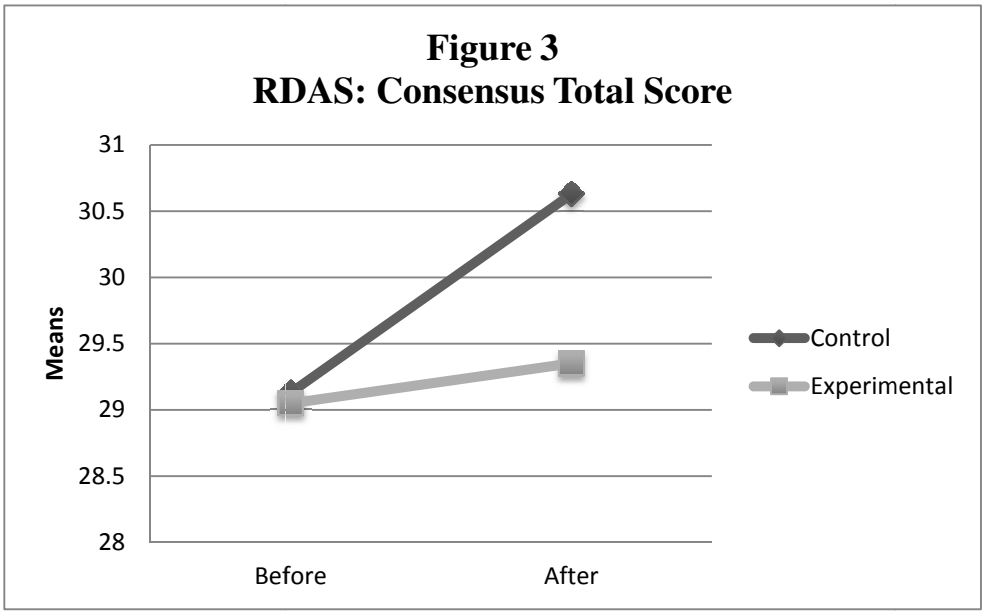

Figure 3. RDAS: Consensus total score.

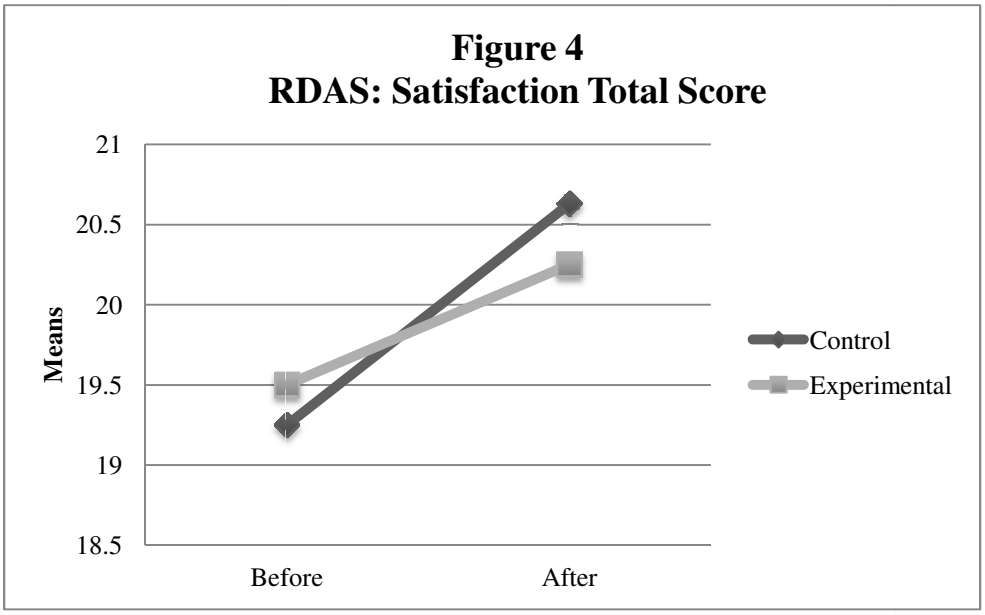

Figure 4. RDAS Satisfaction total score.

A mixed-design ANOVA was used to consider changes in RDAS Cohesion scores over time. No main effect was found for the between-groups factor (experimental condition), F (1,26) = 0.05, p = .829, or for the repeated-measures factor (change over time), F (1,26) = 0.46, p = .504. The anticipated interaction effect was not found, F (1,26) = 0.04, p = .838 (see Figure 5).

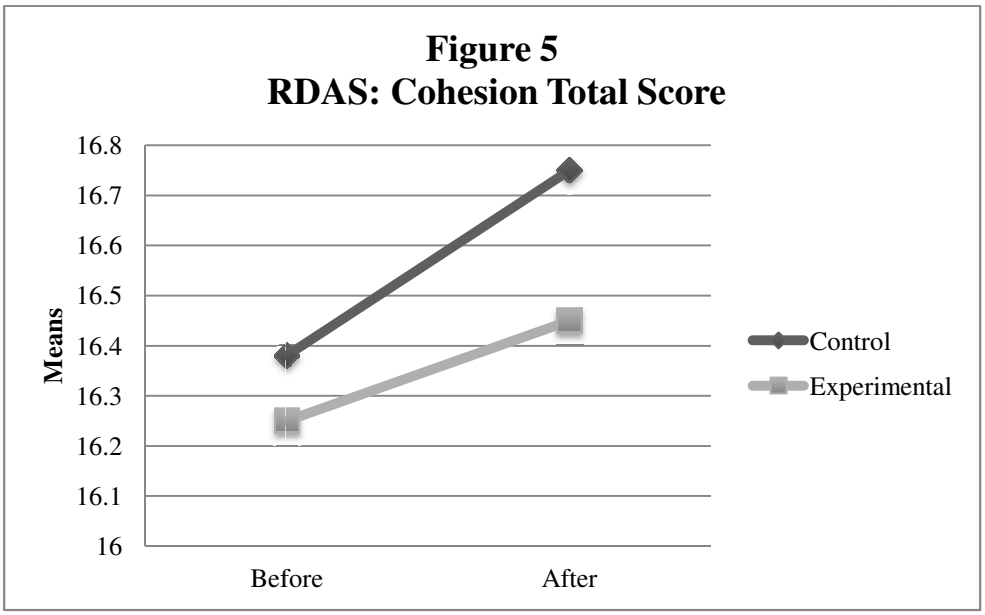

Figure 5. RDAS: Cohesion total score.

A bivariate correlation for the experimental group was run on select factors to compare to PCI and RDAS scores. These factors included demographic information, information about the nature of participants' smart phone use, frequency of use, and perception of use. The results of the bivariate correlation for the experimental group can be found in Table 1.

Table 1

Results of the Bivariate Correlation for the Experimental Group

Pearson Correlations (Exp Group)	**PCI: Total (Pre-Test)**	**RDAS: Consensus (Pre-Test)**	**RDAS: Satisfaction (Pre-Test)**	**RDAS: Cohesion (Pre-Test)**	**RDAS: Total (Pre-Test)**	**PCI: Total (Post-Test)**	**RDAS: Consensus (Post-Test)**	**RDAS: Satisfaction (Post-Test)**	**RDAS: Cohesion (Post-Test)**	**RDAS: Total (Post-Test)**
Age:	-0.208	-0.181	-0.245	-0.06	-0.218	0.072	-0.075	-0.096	-0.042	-0.088
Years Married:	-0.191	-0.454*	-0.174	-0.384	-0.472*	0.047	-0.245	-0.227	-0.211	-0.273
Gender:	-0.099	-0.304	-0.025	0.17	-0.139	0.143	-0.049	-0.19	0.003	-0.108
Perception of partner's opinion of their use:										
(Pre-Test)	0.506*	0.082	-0.156	0.134	0.041	0.482*	0.319	-0.172	-0.093	-0.011
(Post-Test)	0.324	-0.166	-0.036	0.316	-0.008	0.271	0.012	0.043	0.004	0.026
Times called partner in last 48 hours:										
(Pre-Test)	0.054	-0.026	-0.191	-0.178	-0.143	0.196	0.004	-0.015	0.124	0.041
(Post-Test)	-0.154	-0.667*	-0.409	-0.629*	-0.768*	0.073	-0.424	-0.428	-0.534*	-0.554*
Times texted partner in last 48 hours:										
(Pre-Test)	0.036	0.148	-0.007	0.197	0.156	0.278	0.011	-0.028	0.163	0.052
(Post-Test)	0.269	0.074	0.282	0.32	0.253	0.564*	0.427	0.216	0.422	0.409
Success shutting off phone for experiment condition:	0.384	0.182	0.657*	0.479*	0.506*	0.355	0.508*	0.651*	0.675*	0.744*

Note. *Correlation significant at the 0.05 level.

Chapter 4

Discussion

This study aimed to examine the possible effects smart phone use may have upon partner communication and relationship satisfaction. Research surveys continue to show rising smartphone ownership, as well as frequent use of smartphones for a variety of different tasks. While some preliminary research findings show a positive correlation between smartphone use and stress, psychological and relational effects of smartphone use is still a relatively new area of research. This study was designed to contribute to this need for research by testing the hypothesis that smart phone use had a negative effect on positive communication and relational satisfaction among married/partnered couples.

The findings of this study failed to show a significant effect of smart phone use while in the presence of your partner upon positive partner communication or relational satisfaction. Participants in the experimental group saw no significant change when compared to the control group. Both groups did see an increase in relational satisfaction, as measured by the satisfaction construct within the RDAS; however, this effect was seen across groups. This may suggest that the examination of one's own smartphone habits or relational satisfaction via the pre-test survey somehow prompted an increase in satisfaction, possibly by heightening awareness of each couple's opinions of each others' smartphone use.

The failure to find significant results may be due to a few important factors. Most notably is the small sample size of the study. After some participants were eliminated due to a failure to

complete the study or by failing to meet study conditions, only 28 participants remained. This severely limited the ability to gain more powerful and meaningful results. The control group was also significantly smaller than the experimental group, due to participant drop-out. Because the control group was so small, it is likely not a representative control sample, and its results may be more heavily influenced by outliers. It should be noted that most participants identified as Christian, and they largely possessed some level of college education. The results of this study might only describe this specific demographic participant sample. It might be hypothesized that an effect could be found if the demographics of the participant sample were more varied and representative of the general populace.

While the experimental sample did not experience a significant effect on marital/partner satisfaction or communication by the reduction of smartphone use, certain demographic and smartphone use information was found to be correlated to certain relational factors, as demonstrated by Table 1. Total years married was negatively correlated with the RDAS total score at the beginning of the study, but this relationship was not present at the end of the 2-week intervention. Age and gender were not found to be related to measured scores. The pre- and post-test surveys also asked each participant to guess how their partnered viewed their smartphone use. This item was positively correlated with PCI total scores on the pre-test and post-test, suggesting that partners with positive approval of each other's smartphone use also experience more positive partner communication.

Particularly interesting was the strong, negative relationship that contact with partner via smartphone calling had with a number of measured constructs. An increased number of phone calls in the last 48 hours to their partner at the end of the 2-week intervention were negatively

correlated to post-test RDAS Cohesion and Total scores; interestingly, they were also negatively correlated to RDAS Consensus, Cohesion, and Total scores on the pre-test survey as well. It is unclear why an increased amount of verbal communication via smartphone was negatively related to relational satisfaction and cohesion, and it might be a focus of future studies. Texting, on the other hand, was found to be positively correlated to positive partner communication on the post-test, suggesting there may be significant differences between the two modes of communication.

What might be the most significant factor in describing the results is the positive correlation of "intervention success" with post-test RDAS totals and all the RDAS constructs. The *intervention success* item of the post-test survey asked participants to report how many days they successfully shut off their phones over the 2-week intervention. Those who were more successful in completing the intervention over two weeks were also more satisfied with their relationship across all measured relational constructs found within the RDAS. This could mean a few different things. It is possible that a failure to complete the intervention for most of the 2-week intervention had a significant effect on the results of the study (namely, measured change in relational satisfaction). It is also possible that this positive correlation is more of a descriptor of the participants; those who were able to shut off their phones more often were already more satisfied with their relationship (as evidenced by the positive correlation with pre-test RDAS scores). It may be that individuals with higher partner relationship satisfaction simply find it easier to shut off their phones when they are with their partner.

Limitations

The majority of study participants were gathered from a private university, limiting the generalization of the results. Financial constraints limited the amount of incentive offered to potential participants, which may have reduced participation interest. It is also possible that participants who were interested in the study self-selected for participation. Participants who self-selected for participation may already possess a greater awareness of their smartphone use, which could translate to greater partner communication and relational satisfaction. This could have implications for results generalization. It is possible that individuals and couples with heavier, more frequent smartphone use opted out of participation due to the study conditions.

The study conditions were also limiting. This study had to rely on each participant's initiative to shut off their smart phone during the specified 2-hour intervention period, which resulted in many participants failing to shut off their phones every day of the 2-week intervention. While the 2-hour intervention period was supposed to be consistent each day as well as occur while the participant was with their partner, it is possible that this was not always the case.

Future Research

While some preliminary research is being conducted on the effects of smartphone use, there is still a great need for further exploration. Should replications of this study be attempted, they should focus on achieving a much larger participant sample, which would greatly increase the power of the results. Greater variation in participant demographics should also be pursued, so that the results will be more descriptive of the general population.

Additionally, future research might pay specific attention to certain factors that found to be correlated with relational satisfaction. The partner perception of smart phone use might have significant bearing on positive communication, and this factor should be examined separate from amount of smart phone use. The type and amount of communication between partners through their smartphones also may be important. Research examining effects and related factors of these smartphone communication aspects may yield interesting and relevant results in smartphone research.

Finally, this research study focused primarily upon smartphone use and certain aspects of a married or partnered relationship. There are numerous other romantic relationship aspects that future research might consider in relation to smartphone use. Additionally, researchers should continue to analyze smartphone ownership and use in a broader relational context, examining social friendships, work relationships, and family dynamics.

Conclusion

In summary, the primary hypothesis of the research was not supported, as the results showed no significant change over time when comparing both the control and experimental group. Pearson's correlations suggest that there may be significant factor relationships, however, and future research might consider the mediating effects that amount of between-partner smartphone communication and partners' perceptions of each other's smartphone use may have on relational satisfaction. Finally, future research might also attempt a replication of this study, considering the low sample size and the results' low generalizability that limited the power of the results.

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Appendix A

Demographic Questionnaire

Age:

Date you were married/partnered:

Number of Children:

What is your gender?

- What is your gender? Female
- Male
- Other

What is your race/ethnicity? Mark one or more.

- What is your race/ethnicity? Mark one or more. Asian-American
- African-American
- Caucasian
- Hispanic
- Native American
- Other (please specify)

Highest Level of Education:

- Highest Level of Education: Some high school
- High school diploma
- Some college
- Bachelor's degree
- Graduate/professional degree

Religion:

- Religion: Christian
- Jewish
- Buddhist
- Muslim
- Hindu
- A follower of another religion
- Not religious

Appendix B

Curriculum Vitae

Joshua Borrelli

8822 SW Ash Meadows Cir. #1137
Wilsonville, OR 97070
Phone: (503) 550-3677
Email: jborrelli05@gmail.com

EDUCATION

Doctor of Psychology in Clinical Psychology **Jan 2010-Present**
George Fox University in Newberg, Oregon
Graduate Department of Clinical Psychology: APA Accredited
Degree Anticipated: May 2015
Dissertation: Exploring the Influence of Smartphone Technology within the Context of Partner Relationships: An Intervention Study
-Final Defense completed June 2014

Master of Arts in Clinical Psychology **May 2012**
George Fox University in Newberg, Oregon
Graduate Department of Clinical Psychology: APA Accredited

Bachelor of Arts, Psychology **Dec 2009**
George Fox University in Newberg, Oregon
Magna Cum Laude, Outstanding Psychology Student Award

SUPERVISED CLINICAL EXPERIENCE

Student Health and Counseling Center at Portland State University **August 2014-Present**
Position: Therapist ***Portland,OR***
Setting: University Student Health and Counseling Center
Population: Non-traditional undergraduate, graduate, and international students, ages 18+, of varying SES, cultural/ethnic backgrounds
Supervisor: Noelle Savatta, PhD

Experiences:

- Population Service
    - Individual Therapy: Conducting cognitive-behavioral and interpersonal therapy within a time-limited, 50-minute, 12-session model, with a few longer-term clients. Clients exhibit a wide variety of pathology, most commonly presenting with anxiety and depression. Complete structured intake interviews with each client.
    - Triage Service and Crisis Evaluation: Evaluate presenting issues and level of risk for walk-in student appointments, provide support and connect student to appropriate SHAC services or community resources. Requires knowledge of available resources, appropriate referrals and recommendations for each client's unique presentation, and crisis management.
    - Group Therapy: Co-lead an interpersonal process group on a weekly basis. The group has focused on processing grief and loss, exploring family relationship dynamics, and processing relational interactions that occur in-session.
    - Comprehensive Assessment: Test and evaluate students for learning disability and/or ADHD diagnoses. Comprehensive reports are composed, and results are presented to the client in a feedback session.
        - Tests Administered and Scored: Advanced Clinical Solutions for WAIS-IV and WMS-IV (ACS) - Test of Effort; Attention Deficit Disorders Evaluation Scale – Self-Report and Home Version; Beck Anxiety Inventory (BAI); Color Trails Test; Integrated Visual and Auditory Continuous Performance Test – Advance Edition (IVA-AE); Integrated Visual and Auditory Continuous Performance Test – Plus Edition (IVA-Plus); Minnesota Multiphasic Personality Inventory- 2nd Edition (MMPI-2); Nelson-Denny Reading Test; Rey Complex Figure Test (RCFT); Stroop Color-Word Test; Weschler Adult Intelligence Scale-4th Edition (WAIS-IV); Weschler Memory Scale- 4th Edition Flexible Approach (WMS-IV); Woodcock-Johnson IV, Tests of Achievement (WJ-IV, ACH); Woodcock-Johnson IV, Tests of Cognitive Abilities (WJ-IV, COG)
- Consultation
    - Weekly consultation with a multi-disciplinary team to discuss difficult cases, appropriate referrals, and holistic client care.
- Supervision/Training
    - Weekly, 2-hour individual supervision of individual therapy client service with Noelle Savatta, PhD
    - Weekly, 1-hour group supervision of assessment cases with Karen Ledbetter, PsyD

- Weekly, 1-hour case presentations with other trainees and licensed, staff psychologists
- Weekly, 1-hour didactic trainings on a variety of topics aimed at client service and professional growth from a variety of professionals
- Weekly, 1-hour professional development meetings with Cheryl Forster, PsyD
- Weekly, .5-hour individual supervision of interpersonal process group with Lisa Koralewicz, MPH, LCSW
- Weekly individual supervision of assessment cases as needed with Jennifer Dahlin, PsyD

Health and Counseling Center at George Fox University **Sept 2013-May 2014**
Position: Therapist ***Newberg,OR***
Setting: University Health and Counseling Center
Population: Traditional undergraduate students between the ages of 18-25
Supervisor: William Buhrow Jr., PsyD, licensed and practicing psychologist, Dean of Student Services
Experiences:

- Population Service
  - Individual Therapy: Conducting cognitive-behavioral and solution-focused therapy within a short-term, 50-minute, 6-session model with some long-term clients. Clients exhibit a wide variety of pathology, most commonly anxiety and depression. Complete structured intake interviews with each client.
  - Crisis Evaluation: Evaluate level of risk for students in crisis, provide support and connect student to appropriate support systems.
  - Couples/Relationship Therapy: Focus on conflict resolution, communication skills, and relational insight building.
  - Comprehensive Assessment: Test and evaluate students for learning disability, personality assessment, and ADHD diagnoses. Comprehensive reports are composed, and results are presented to the client in a feedback session.
    - Tests Administered and Scored: Wechsler Adult Intelligence Scale, 4th Edition (WAIS-IV); Personality Assessment Inventory (PAI); Wechsler Memory Scale, 4th Edition (WMS-IV); Conners' Adult ADHD Scale
- Consultation
  - Consultation and collaboration of care with on-site nurse practitioner to provide holistic treatment for undergraduate students.
- Supervision/Training
  - Weekly, 2-hour training seminars led by William Buhrow Jr., PsyD
  - Weekly, 1-hour individual supervision by William Buhrow Jr., PsyD

Willamette Family Medical Clinic **Sept 2012-June 2013**
Position: Therapist, Mental Health Consultant ***Salem, OR***
Setting: Medical clinic with multidisciplinary staff
Population: Ethnically, culturally, and sexually diverse, low-SES individuals and families
Supervisor: Joel Gregor, PsyD, licensed and practicing psychologist, professor
Experiences:

- Population Service
    - Individual Therapy: Conducted cognitive-behavioral therapy within a short-term, 50-minute, 8-session model, including a few long-term patients. Patient referrals were received from on-site medical providers. Patient pathology treated included anxiety, depression, obsessive-compulsive disorder, autism, oppositional-defiant disorder, bereavement, drug abuse, developmental disability, addiction, attention deficit disorder, and relational conflicts. Also completed a structured intake interview for each new client
    - Crisis Evaluation/Triage: Accepted "warm hand-offs" from providers to immediately meet with and assess patients under significant distress. Conducted quick assessment of levels of functioning, severity of symptoms, and level of risk to self or others. Made appropriate referrals and recommendations.
    - Family Therapy: Facilitated family therapy sessions with children and parents to correct faulty communication patterns, examine relational dynamics, and improve parenting techniques
    - Couples/Relationship Therapy: Examined conflict resolution difficulties, communication patterns, and relational needs within the context of a 50-minute therapy session with both partners present.
    - Comprehensive Assessment: Testing and assessment was conducted to assist on-site providers with diagnosis, most commonly for ADHD and autism. Results were presented to the patient and/or family in a feedback session and discussed with the medical provider.
        - Tests Administered and Scored: Wechsler Intelligence Scale for Children, 4th Edition (WISC-IV); Wechsler Adult Intelligence Scale, 4th Edition (WAIS-IV); Wechsler Abbreviated Scale of Intelligence, 2nd Edition (WASI-II); Wechsler Individual Achievement Test, 3rd Edition (WIAT-III); Stanford-Binet Intelligence Scales, 5th Edition (SB-5); Delis-Kaplan Executive Function System (D-KEFS); Wide Range Assessment of Memory and Learning, 2nd Edition (WRAML-2); Behavior Assessment System for Children, 2nd Edition (BASC-2); Conners ADHD Rating

Scales; Brown ADD Scales; Child Autism Rating Scale (CARS); Sensory Profile

- Consultation/Collaboration
  - Consulted with medical providers and staff on patient cases to provide holistic care, which included discussion of client symptoms, level of functioning, medication prescription and dosage, and significant medical issues of the patient.
  - Often scheduled patients to meet with therapist and medical provider sequentially for effective, holistic treatment.
- Presentations
  - Composed and presented relevant mental health information and training to medical providers and staff during their lunch breaks.
    - Topics presented: suicide risk assessment; diagnosis and behavioral treatment of attention-deficit/hyperactivity disorder
- Supervision/Training
  - Weekly, 1-hour individual supervision with Joel Gregor, PsyD
  - Weekly, 1-hour group supervision with Joel Gregor, PsyD
  - Received 1-hour trainings from Joel Gregor, PsyD on a monthly basis
  - Weekly peer case consultation with other masters-level graduate students

St. Paul School District **Sept 2011-June 2012**

Position: School Psychologist/Counselor ***St. Paul, OR***

Setting: Rural high school system with full range of educational and administrative staff

Population: Adolescent students, Latino/a majority and Caucasian minority

Supervisor: Elizabeth Hamilton, PhD, licensed and practicing psychologist, professor

Experiences:

- Population Service
  - Individual Therapy: Conducted Rogerian and cognitive-behavioral therapy within a short-term, 30-minute, "as-needed" model, including a few long-term clients. Student referrals were received from teachers, school staff, or through self-referral. Student pathology treated included anxiety, depression, bullying victims, physical abuse victims, significant trauma, autism, bereavement, attention deficit disorder, and relational conflicts. Significantly distressed students were usually seen immediately, and risk assessment was conducted.
  - Program Development: Developed class curriculum for study skills class and social skills group through adaption of evidence-based curriculum and material.
  - Class Instruction: Led semester-long, weekly, 1-hour study-skills class. Included lesson planning, instruction and demonstration of material, classroom management, and assignment of homework exercises.

- Group Workshop/Counseling: Led semester-long, weekly, 1-hour social-skills training group. Included lesson planning, classroom management, instruction, group dynamic facilitation, and group intervention.
- Comprehensive Assessment: Testing and assessment was conducted on-site for learning disorder evaluations. Full reports of results were completed. Results were presented to parents, children, teachers, and IEP boards.
  - Tests Administered and Scored: Wechsler Intelligence Scale for Children, 4th Edition (WISC-IV); Wechsler Individual Achievement Test, 3rd Edition (WIAT-III); Wechsler Nonverbal Scale of Ability (WNV); Wide Range Achievement Test, 4th Edition (WRAT4); Wide Range Assessment of Memory and Learning, 2nd Edition (WRAML-2); Wide Range Intelligence Test (WRIT); Behavior Assessment System for Children, 2nd Edition (BASC-2)

- Consultation/Collaboration
  - Consulted with teachers and administrative staff to provide appropriate in-class and in-system interventions and expectations for struggling students. Met with system administrators regularly to discuss new ways to serve the school system and student population.
- Supervision/Training
  - Received 1-hour trainings from Elizabeth Hamilton, PhD on a monthly basis
  - Weekly, 1-hour individual supervision with Elizabeth Hamilton, PhD
  - Weekly, 1-hour group supervision with Elizabeth Hamilton, PhD
  - Weekly peer supervision and case consultation with MA graduate student

Charity Benham, PsyD Private Practice **June 2012-July 2014**

Position: Psych-technician ***Salem, OR***

Setting: Private practice office housing six clinicians

Population: Marion County referrals of applicants for developmental disability services, and private practice clientele

Supervisor: Charity Benham, PsyD, licensed and practicing psychologist

Experiences:

- Population Service
  - Psychological Test Battery Administration: Administer numerous cognitive, personality, and neuropsychological tests to private practice clients or client referrals from the county for developmental disability assessment. Responsibilities include reviewing client charts, administering tests, scoring, relaying results and observations to Dr. Benham, and discussing possible diagnoses.
    - Tests Administered and Scored: Wechsler Intelligence Scale for Children, 4th Edition (WISC-IV); Wechsler Adult Intelligence Scale, 4th Edition

(WAIS-IV); Wide Range Achievement Test, 4th Edition (WRAT4); Wide Range Assessment of Memory and Learning, 2nd Edition (WRAML2); Delis-Kaplan Executive Function System; Rey- Complex Figure Test; Grip-Strength Test; Finger-Tapper Test; Trail- Making Test; Personality Assessment Inventory (PAI); Rorschach

- Supervision
    - Regular meetings with Charity Benham, PsyD to discuss client cases, review charts, construct assessment batteries, conceptualize results, and discuss diagnosis.

SUPERVISION EXPERIENCE

George Fox University, PsyD Program **Sept 2013-May 2014**
Position: Peer Supervisor ***Newberg, OR***
Supervisor: Mark McMinn, PhD
Experience:

- Peer Supervision of 2nd-year graduate student
    - Weekly, 1-hour meetings
    - Developmental approach to supervision
    - Discuss student's professional development in areas of academics, research, and clinical work
    - Examine student's clinical casework, case conceptualization, and interventions used
    - Provide appropriate feedback and advice to aid in professional development in stated domains
- Supervision of peer supervision
    - Weekly, 1-hour supervision with Mark McMinn, PhD

George Fox University, PsyD Program **Sept 2012-Dec 2013**
Position: Teacher's Assistant, Cognitive Assessment Class ***Newberg, OR***
Supervisor: Wayne Adams, PhD, Professor
Experience:

- Co-lead and instruct weekly, 1-hour lab for Cognitive Assessment course in the GFU Graduate Department of Clinical Psychology
    - Class consisted of 2nd-year graduate students in the clinical psychology doctoral program
    - Instruct and demonstrate correct test administration and scoring for the following tests: Wechsler Intelligence Scale for Children, 4th Edition (WISC-IV); Wechsler Adult Intelligence Scale, 4th Edition (WAIS-IV); Wechsler Individual Achievement Test, 3rd Edition (WIAT-III); Wide Range Achievement Test, 4th

Edition (WRAT4); Wide Range Intelligence Test (WRIT); Wide Range Assessment of Memory and Learning, 2nd Edition (WRAML2)

- Weekly, 1-hour meetings with Wayne Adams, PhD
  - Review lab instruction, graded assignments of students, and student progress in the course and development of assessment competency
- Review and grade all class coursework
  - Review scored test protocols for scoring accuracy and technique
  - Edit and provide feedback on assessment report writing
- Review video-taped test administrations
  - Check for administration accuracy
  - Provide appropriate feedback of student strengths and areas of growth
- Regular meetings with students
  - Provide feedback on development of assessment administration and scoring proficiency
  - Provide one-to-one additional instruction and demonstration

RESEARCH EXPERIENCE

Dissertation

Title: Exploring the Influence of Smartphone Technology within the Context of Partner Relationships: An Intervention Study
Preliminary Defense Completed: April 2013
Final Defense Completed: June 2014
Dissertation Chair: William Buhrow Jr., PsyD
Description:

- The purpose of this study was to examine possible negative or positive effects smart phone use may have on partner satisfaction and couple-communication within a married or partnered couple. This was measured via survey administration and comparison of groups of married/partnered couples with varying degrees of smartphone use. It was hypothesized that couples who turn off their smartphones for 2 hours a day during a period while they are together would increase communication and positive experience, which would increase partner satisfaction, when compared to couples who do not undergo the intervention design. Data analysis showed no significant change between groups after the two-week intervention. Pearson's correlations suggested that some factors may be related to relationship satisfaction growth, including number of years married/partnered, partner phone communication frequency, and partner perception of partner's smartphone use.

Research Vertical Team **March 2011-Present**

Description:

- Composed of eight students in GFU Clinical Psychology Doctoral Program and one program faculty member (William Buhrow Jr., PsyD)
- 2-hour, twice-monthly meetings
- Designed to assist graduate students and faculty members in the development and completion of student dissertations and supplemental research projects

Experience:

- Training on construction of dissertation proposal, research design, poster design and presentation, interpretation of research results and data
- Received feedback on dissertation intervention design, written dissertation proposal, and poster presentation from peers and faculty member
- Collaboration with peers and faculty member on own research and the research projects of others
- Feedback and collaboration led directly to successful preliminary defense of dissertation and acceptance of poster presentation into national

George Fox University Program Evaluation **April 2013**

Description:

- Part of research team to examine student satisfaction of spiritual formation curriculum within the George Fox University Clinical Psychology Doctoral Program, as well as the curriculum's effectiveness according to certain student behaviors.

Experience:

- Designed survey to be sent out to all students and alumni of the clinical psychology doctoral program
- Organized and interpreted results of survey
- Presented results of survey to peers and faculty members
- Results led directly to publication of article

POSTER PRESENTATIONS

Borrelli, J., Buhrow Jr., W., & Snider, J. (2013, April). *The effect of premarital education on marital communication.* Poster presented at the annual national conference of the Christian Association for Psychological Studies, Portland, OR.

Blake, A., Borrelli, J., & Hamilton, E. (2013, May). *Improvements in internal locus of control of rural elementary school children in response to computerized therapeutic intervention.*

Poster presented at the annual conference of the Oregon Psychological Association, Eugene, OR.

PUBLICATIONS

McMinn, M., Goodworth, M.C., Borrelli, J., Goetsch, B., Lee, J., & Uhder, J. (2013). Spiritual formation training at George Fox University. *Journal of Psychology and Christianity, 32,* 313-319.

AFFILIATIONS

American Psychological Association 2010-Present
Affiliate Member

CLINICAL TRAININGS AND SEMINARS

Systems-Centered Group Psychotherapy Dec 15, 2014
Susan Gantt, PhD

Integrated Primary Care Sept 25, 2013
Brian Sandoval, Psy.D and Juliette Cutts, Psy.D

African American History, Culture, Addictions, & Mental Health Treatment Jan 30, 2013
Danette C. Haynes, LCSW and Marcus Sharpe, Psy.D

Sexual Identity Nov 4, 2012
Erica Tan, Psy.D

Cross-Cultural Psychological Assessment Nov 2, 2011
Tedd JudD, PhD

Motivational Interviewing Oct 4, 2011
Michael Fulop, Psy.D

Best practices in Multi-cultural assessment Oct 27, 2010
Eleanor Gil-Kashiwabara, PhD

REFERENCES

Noelle Savatta, PhD
Supervisor, Therapist
Portland State University: Student Health and Counseling Center, Portland, Oregon
Phone #: 503-725-2800
Email: nsavatta@pdx.edu

Karen Ledbetter, PsyD
Supervisor, Assessment Coordinator, Therapist
Portland State University: Student Health and Counseling Center, Portland, Oregon
Phone #: 503-725-2800
Email: ledbetterk@pdx.edu

William Buhrow, PsyD
Professor, Supervisor, Advisor, Director of GFU Health and Counseling Center
George Fox University: Health and Counseling Center, Newberg, Oregon
Phone #: 503-554-2340
Email: bbuhrow@georgefox.edu

Joel Gregor, PsyD
Professor, Supervisor, Head of GFU Behavioral Health Clinic
George Fox University: Graduate Department of Clinical Psychology, Newberg, Oregon
Phone #: 503-899-2293
Email: jgregor@georgefox.edu