ABSTRACT

Healthcare institutions and providers are charged with supporting patient autonomy by creating an autonomy supportive environment and practicing Shared Decision Making. Yet, patients and providers may hold different opinions regarding autonomy, patients may not follow-through with being autonomous, and providers may not engage in equal amounts of autonomy support. Study 1 found that patients ($N = 214$) and providers ($N = 19$) had different perceptions of patient autonomy and provider support of patient autonomy. Study 2 found that autonomy primed patients ($n = 123$) and non-autonomy primed patients ($n = 125$) received equal amounts of autonomy support from providers ($N = 22$). However, Study 2 results indicate a ceiling-effect—all patients reported high personal autonomy and provider support of autonomy. Future work should examine whether priming patient autonomy would be advantageous in different populations and if different types of healthcare providers are more likely to engage in autonomy support.

INDEX WORDS: autonomy, patient autonomy, patient autonomy support, healthcare perceptions, patient centered care, shared decision making
DIAGNOSING THE DIALOGUE BETWEEN PHYSICIANS AND PATIENTS: ASSESSING REPORTS OF HEALTHCARE AUTONOMY

by

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# TABLE OF CONTENTS

LIST OF TABLES ........................................................................................................... v

## CHAPTER

1 INTRODUCTION ............................................................................................................. 1

   The Changing Nature of Healthcare ......................................................................... 1

   The Role of Autonomy in PCC and SDM ................................................................. 2

   Shortcomings of SDM in Practice ........................................................................... 3

   The Present Studies .................................................................................................. 5

2 STUDY ONE .................................................................................................................. 7

   Method ..................................................................................................................... 7

   Results ..................................................................................................................... 9

   Discussion ............................................................................................................... 11

3 STUDY TWO ................................................................................................................. 13

   Method ................................................................................................................... 13

   Results ................................................................................................................... 16

   Discussion .............................................................................................................. 18

4 GENERAL DISCUSSION .............................................................................................. 20

REFERENCES ............................................................................................................... 27
LIST OF TABLES

Table 1: Patient Autonomy Questionnaire and Healthcare Provider Autonomy Questionnaire ...23
Table 2: Patient Pre-Visit Questionnaire and Patient Post-Visit Questionnaire .........................25
Table 3: Provider Post-Visit Questionnaire ..................................................................................26
CHAPTER 1

INTRODUCTION

“When I took the Hippocratic Oath and was effectively ‘sworn in’ as a doctor, I took the same vow that doctors have taken for generations. Patient autonomy is core to this oath.” Ami Bera

“You treat a disease, you win, you lose. You treat a person, I guarantee you’ll win, no matter what the outcome.” Patch Adams

The Changing Nature of Healthcare

Healthcare institutions once operated under a paternalistic style of practice. Physicians who practiced medical paternalism acted on behalf of their patients’ “best interests” without obtaining true informed consent (Buchanan, 1978; Childress, 1979). Some paternalistic physicians even withheld relevant information from patients and their family members—believing those omissions were for their patients’ greater good (Oken, 1961). Others purposefully excluded patients from the medical decision-making process. These practices were pervasive throughout the medical field because providers, due to their knowledge and experience, were presumed to be best suited to decide what was best for their patients (Charles, Gafni, & Williams, 1999; Sandman & Munthe, 2010).

The emergence of several ethical and practical counterarguments caused medical institutions to largely abandon paternalism and adopt a more patient-centered approach to medicine. The term Patient Centered Care (PCC) originated in 1988 when the Picker Institute called for healthcare professionals to start attending to patients’ emotional needs and personal values while providing medical care (see Barry & Edgman-Levitan, 2012). PCC is now defined
as a medical practice that emphasizes the importance of patient choice and the right to be well-informed and autonomous (Beauchamp & Childress, 2009; Sandman & Munthe, 2010).

Of particular importance within the PCC approach is practicing Shared Decision Making (SDM). SDM involves both the patient and healthcare provider actively participating in discussions regarding health decisions (Sandman & Munthe, 2010). SDM occurs when both parties disclose all relevant information, patients express their values and feelings surrounding various health-related options, providers acknowledge and discuss patient feelings, and then both provider and patient come to an agreement on a healthcare decision that is best for the patient (Charles et al., 1999). When healthcare professionals engage in SDM, their patients show a decrease in decisional conflict, an increase in overall knowledge, and higher satisfaction with their healthcare provider (Williams, Lynch, & Glasgow, 2007; Stacey et al., 2011).

**The Role of Autonomy in PCC and SDM**

At the core of SDM is an underlying respect for and support of patient autonomy. Autonomy refers to one’s self-governance over decisions (Deci & Ryan, 1987). Highly autonomous people decide and act in accordance to their own values and are free from external influence or control (Deci & Ryan, 1987). Research shows autonomous decision making results in greater decisional satisfaction, more persistent and consistent behavior, and overall greater well-being (Deci & Ryan, 1987; Kasser & Ryan, 1999; Ryan, Patrick, Deci, & Williams, 2008). Given these findings, it is unsurprising that healthcare institutions have placed a greater obligation on their providers to respect and support patient autonomy (Beauchamp & Childress, 2009).

One way to support patient autonomy is by making healthcare environment changes that favor SDM, for example by encouraging patients to engage in health behaviors on their own
accord, successfully dealing with barriers to changing behavior, and conveying respect and acceptance toward individual patients (Ng et al., 2012). A meta-analysis conducted by Ng and colleagues (2012) showed patient autonomy support to be positively correlated with both mental (i.e., quality of life, vitality, positive affect) and physical (i.e., smoking abstinence, exercise, medication adherence) health, and negatively correlated with depression, anxiety, and negative affect.

Such changes to the healthcare environment can be further supported by healthcare providers themselves. For instance, healthcare providers can specifically engage in autonomy supportive behavior by asking for (and respecting) patients’ unique perspectives, supporting patients’ health initiatives, providing relevant information pertaining to medical treatment, and clarifying patients’ treatment options—while also minimizing undue pressure or control (Williams et al., 2006). Healthcare providers who behave in an autonomy supportive manner are, by definition, engaging in SDM, which is of critical importance to enacting true PCC (Barry & Edgman-Levitan, 2012; Légaré et al., 2010; Sandman & Munthe, 2010). Healthcare providers have learned to support patient autonomy through communication training (Murray et al., 2015; Williams, Gagné, Ryan, & Deci, 2002), motivational interviewing techniques, such as empathy and active listening (Pollak et al., 2011), and training in behavioral counseling (Fortier, Sweet, O’Sullivan, & Williams, 2007). Such interventions have resulted in an overall improvement in patients perceived autonomy support (Fortier et al., 2007; Murray et al., 2015; Williams et al., 2002) and specific health initiatives (Williams et al., 2006).

**Shortcomings of SDM in Practice**

Emerging research on the effectiveness of SDM on autonomy support is promising: providers who practice SDM support patient autonomy, and patients show corresponding
improvements in mental and physical health (Ng et al., 2012). However, there is strong evidence suggesting that SDM is not implemented consistently within the United States healthcare system (Barr & Durand, 2016; van Ryn, 2002), and patients and providers are not always on the same page regarding aspects of their healthcare (Coulter & Jenkinson, 2005; Olson & Windish, 2010).

From the patient perspective, research has documented a gap between what patients expect and what they perceive they get from their healthcare providers. In a survey-study across eight European countries, for example, patients reported a desire for greater autonomy in medical encounters but felt they were not given this opportunity (Coulter & Jenkinson, 2005). A different study noted significant discrepancies between patient and healthcare-provider opinions regarding patient knowledge and inpatient care (Olson & Windish, 2010). Specifically, 77% of healthcare providers in the sample believed their patients understood their diagnosis compared to 57% of patients who expressed complete understanding. Additionally, 98% of healthcare providers reported discussing patients’ anxieties and fears, whereas only 54% of patients reported their providers did this. Clear communication and discussion of patient values and feelings is a substantial component of SDM and autonomy support, but there is an obvious mismatch seen in patient and provider reports of successful dialogue (Beauchamp & Childress, 2009; Charles, et al., 1999; McAlliser, 2016; Sandman & Munthe, 2010).

From the healthcare provider perspective, Barr and Durand (2016) report many healthcare providers perceive SDM as time-consuming and competing with other priorities. The authors also note the integration of SDM into practice can be complicated, especially if providers require additional tools or skill training (Barr & Durand, 2016). Additional work has revealed that, while holding patient demographics constant, healthcare provider communication patterns, information sharing, and recommended treatment plans vary from patient to patient (van Ryn,
These findings heavily suggest that healthcare providers may be reluctant to engage in and differentially utilize SDM during patient encounters, which ultimately prevents true PCC.

These findings suggest, despite the heavy push for healthcare institutions to respect and promote patient autonomy through PCC and SDM (Barry & Edgman-Levitan, 2012; Beauchamp & Childress, 2009), that the practice of PCC and SDM may not be as common as one would hope. If PCC and SDM are inconsistent across healthcare practice, then perhaps patient autonomy and provider support of autonomy is inconsistent across individuals and specific types of healthcare. The present research sought to uncover whether inconsistencies exist in patient autonomy and healthcare provider support of patient autonomy, if patients could be made to feel more autonomous, and if feeling more autonomous results in different experiences within the healthcare visit.

**The Present Studies**

**Study 1.** Study 1 directly examined a potential gap between patient and healthcare provider perceptions, specifically focusing on perceptions of patient autonomy and healthcare provider support of patient autonomy. Examining these perceptions is a necessary first step in understanding current healthcare provider-patient relationships. Consider self-fulfilling social attitudes (Madon, Willard, Guyll, & Scherr, 2011; Miller & Turnbull, 1986; Snyder, Tanke, & Berscheid, 1977): discrepant perceptions between patient and provider regarding autonomy in healthcare could influence provider application of and patient engagement in SDM. If healthcare providers incorrectly perceive their patients’ level of autonomy (e.g. their patient has low autonomy), then their patient may inadvertently behave in a way that confirms their providers’ original perception (e.g. the patient may behave in a non-autonomous way), and healthcare providers may not fully engage in SDM. If healthcare providers incorrectly perceive patients as
having low autonomy this could offer an explanation to why SDM has been inconsistently applied across patients (van Ryn, 2002). Furthermore, patient behavior change in response to provider misperception could offer an explanation as to why patients desire greater autonomy in medical encounters but feel they are not given this opportunity (Coulter & Jenkinson, 2005).

**Study 2.** Although past intervention-style research shows that healthcare providers can elicit greater feelings of autonomy in their patients by practicing SDM (Murray et al., 2015; Williams et al., 2006), no empirical studies have examined whether feelings of autonomy can be self-generated by patients. If patients can be made to feel more autonomous prior to seeing healthcare providers, then perhaps patients would be more likely to receive autonomy support from providers through SDM. Study 2 empirically tested if patients could be placed into an autonomous mindset prior to healthcare visits and if being in an autonomous mindset was related to greater autonomy support from healthcare providers. Recall that both patient and provider need to equally engage with one another for SDM to occur (Sandman & Munthe, 2010; Légaré et al., 2010), and an intervention geared toward inducing an autonomous mindset in the patient prior to the healthcare visit may help patients feel empowered enough to engage with their provider.
CHAPTER 2
STUDY ONE

Method

Participants. The patient sample consisted of 214 University of Georgia (UGA) students ($M_{age} = 19.33, SD = 1.39$, 63% female, 70% white) recruited from the Psychology Department Research Pool (RP). The healthcare provider sample came from the university’s campus health center (UHC). All 96 UHC healthcare providers were contacted via email to participate in this study, and 19 (19.79%) healthcare providers completed Study 1. Of the 19 providers who responded to the survey, nine indicated which clinic they worked in: 5 from General Wellness, 2 from the Women’s Clinic, and 2 from Counseling and Psychiatric Services.

Procedure and Measures. The student-patient sample completed a survey on lab computers via Qualtrics, an online survey software. Healthcare providers completed a survey via Qualtrics outside of the lab. All survey instruments and items were randomized to control for possible order effects.

Demographic Questionnaire. A demographic questionnaire was administered only to the student sample. Questions included standard items such as age, race, and gender. Additional health-related questions, such as number of visits to a healthcare provider within the last year and whether the participant currently uses the UHC, were included because previous research suggests greater autonomy is desired by individuals who have recently made a medical decision (Deber, Kraetschmer, Urowitz, & Sharpe, 2007).
Patient Autonomy Questionnaire (PAQ). This 11 item Likert-type (1 = Strongly disagree, 6 = Strongly agree) measure was designed to assess three constructs: (1) how much autonomy one desires in medical situations, (2) the extent to which past healthcare providers have behaved to support one’s autonomy by engaging in elements of SDM, and (3) how understandably past healthcare providers have presented health related information. The items related to patient understanding were included because past research has shown that patients do not understand information as much as their healthcare providers believe (Olson & Windish, 2010).

The full questionnaire is presented in the left side of Table 1, with the three constructs separated. Higher scores on items related to individual autonomy indicate a stronger preference for autonomy in health situations (scores may range between 3-18); higher scores on items related to past healthcare provider behavior indicate past providers strongly supported patient autonomy (scores may range between 6-36); and high scores on the item assessing patient understanding indicate participants are able to understand health-related information presented by their healthcare provider (scores may range between 2-12).

This scale was developed in collaboration with three practicing physicians from the UHC and in reference to both the Autonomy Preference Index (API; Ende et al., 1989) and the Health Care Climate Questionnaire (HCCQ; Williams, Grow, Freedman, Ryan, & Deci, 1996). Overall scale reliability was good, with $\alpha = .84$.

Healthcare Provider Autonomy Questionnaire (HPAQ). This 10 item Likert-type (1 = Strongly disagree, 6 = Strongly agree) questionnaire was designed to measure three components: (1) how autonomous healthcare providers perceive their typical patient to be, (2) the extent to which providers engage in autonomy supportive behavior, and (3) the extent to which providers believe they explain information in an understandable way. The full questionnaire is presented
on the right side of Table 1, with the three constructs separated. Several items within each construct were created to be parallel to items within the PAQ. By creating parallel items comparisons can be made across patient and healthcare provider reports—a similar method was employed by Olson and Windish (2010).

Higher scores on items related to perception of patient autonomy indicate providers perceive their typical patient as highly autonomous (scores may range between 4-24); higher scores on items related to healthcare-provider behavior indicate that providers perceive themselves as engaging in more autonomy supportive behaviors (scores may range between 4-24); and higher scores on items related to perception of understandable communication indicate providers perceive themselves as being able to disseminate information to patients clearly (scores may range between 2-12). This questionnaire was developed in collaboration with three practicing physicians from the UHC and overall scale reliability was adequate, with $\alpha = .77$.

**Results**

61% of students reported currently using the UHC, indicating the obtained sample was representative of the type of patients seen by UHC providers. Participants also reported using medical services an average of 2.41 ($SD = 3.28$) times in the past year, suggesting the majority of participants have recently interacted with healthcare providers. However, the number of times the participants sought medical services was not significantly correlated with participants’ desire for autonomy, $r = .12, p = .101$, contrary to previous research findings (Deber et al., 2007).

Patients’ overall desire for autonomy was high ($M = 15.16, SD = 1.87$) as was their rating of past healthcare provider support of their autonomy ($M = 27.77, SD = 4.84$). Patients also reported a relatively high understanding of the information presented by healthcare providers ($M = 9.33, SD = 1.88$). In contrast with past research, comparisons between males and females did
not reveal statistically significant differences in desire for autonomy (Arora & McHorney, 2000; Cullati, Courvoisier, Charvet-Bérard, & Perneger, 2011; Levinson, Kao, Kuby, & Thisted, 2005) or of past autonomy support ($p$’s > .05 by independent $t$-tests).

Healthcare providers rated their typical patient as expressing high levels of autonomy ($M = 18.42, SD = 2.41$) and rated their own autonomy supportive behavior highly ($M = 21.26, SD = 1.73$). Providers also gave high ratings of their ability to communicate information to their patients in an understandable way ($M = 10.16, SD = 1.25$).

An independent samples $t$-test was conducted on the mean values of the parallel items reflecting general levels of autonomy to examine whether perception of patient autonomy differed between healthcare providers and patients. The analysis revealed that patients reported having significantly higher autonomy compared to how providers rated patient autonomy [patients $M = 10.04, SD = 1.34$; providers $M = 8.95, SD = 1.54$; $t(231) = 3.38, p = .001$]. Thus, healthcare providers reported their typical patient as being less autonomous than participants reported themselves as being.

A second test of the mean values of the parallel items compared provider perceptions of autonomy support they typically engage in to patient perceptions of autonomy support given by past healthcare providers (patients $M = 13.78, SD = 2.54$; providers $M = 16.21, SD = 1.44$). The variance of behavioral ratings given by students and UHC providers were non-normal (Levene’s test statistic was statistically significant, $p = .029$) so a nonparametric Mann-Whitney $U$ test was performed. Patients reported significantly lower mean ratings of provider autonomy support compared to how providers rated their own autonomy supportive behavior ($U = 830, p < .001$). In other words, healthcare providers perceived themselves as engaging in more autonomy supportive behavior compared to patient reports.
Finally, although healthcare providers gave slightly higher ratings of their perception of patient understanding compared to the patients (patients $M = 4.97$, $SD = .77$; providers $M = 5.16$, $SD = .69$), this difference was not statistically significant, $t(231) = .31$, $p = .313$. UHC providers may have an accurate idea of how well they can communicate health related information to their patients.

**Discussion**

To summarize, student-patients reported a high degree of autonomy in medical situations, relatively high past healthcare provider support of autonomy, and a high level of understanding of medical dialogue. The fact that a college age sample reported high levels of autonomy is unsurprising—past research has documented that more autonomy is desired by younger people (Deber et al., 2007; Ende et al., 1989; Hözel et al., 2013; Thompson, Pitts, & Shwankovsky, 1993) and by those with higher education (Arora & McHorney, 2000; Cullati et al., 2011; Deber et al., 2007; Hözel et al., 2013; Levinson et al., 2005).

Healthcare providers reported their typical patient as being relatively autonomous and reported themselves quite highly regarding their support of patient autonomy and communication of health information. This, to the researcher’s present knowledge, is the first time healthcare providers have been asked to rate their typical patients’ level of autonomy and their own support of patient autonomy. Future research should ask these questions outside of a university healthcare setting to see whether perception of patient autonomy and support of patient autonomy differs depending on provider specialty and clinic type.

Similar to previous findings (Coulter & Jenkinson, 2005; Olson & Windish, 2010) there is asymmetry between healthcare provider and patient perspectives. Specifically, the student sample felt more autonomous than healthcare providers perceived them to be, and healthcare
providers perceived themselves as being more autonomy supportive than the student sample perceived them to be. Though Study 1 did not examine how these misperceptions influence the patient-provider interaction, this is a fruitful avenue for further research. Perceptions drive social judgments (Macrae & Bodenhausen, 2000) and shape others’ behavior (Snyder et al., 1977). Given that perceptions from individuals in positions of high power or status shape subordinates’ behavior (Eden, 1984; Kierein & Gold, 2000; Rosenthal & Jacobsen, 1968), it is likely that healthcare-provider perceptions (versus patient perceptions) have stronger effects on the patient-provider interaction.

In contrast to the previous finding that healthcare providers overestimate the degree of patient understanding (e.g., Olson & Windish, 2010), there was no difference between student-patient and provider reports in Study 1. There are two likely explanations for this: first, the present study asked questions related to general understanding, as opposed to diagnostically specific information. Further research may consider uncovering the types of information that are the most difficult for patients to understand. Second, the present sample of college-age students likely had high health literacy (Ickes & Cottrell, 2010), or a high ability to understand, process, and obtain basic health information (Institute of Medicine, 2004), whereas previous researchers used a sample where most participants (66%) did not receive higher education (Olson & Windish, 2010).

This survey study was the first to shed light on the gap between healthcare provider and patient perceptions of autonomy in relation to healthcare. This knowledge is an important first step in understanding current healthcare provider-patient interactions—particularly in how these interactions shape SDM. The next step would be to examine if these misperceptions influence provider application of SDM and patient engagement in SDM.
CHAPTER 3
STUDY TWO

Method

Participants. Patients ($N = 248$) recruited from the UHC completed Study 2. Patients who had an appointment at either UHC’s Women’s Clinic or General Wellness Clinic were invited to participate. Two out of 14 clinics were used because the study design was thought to cause less disruption in these clinics’ regular work flow. Furthermore, past research has shown women prefer greater amounts of autonomy (Arora & McHorney, 2000; Cullati et al., 2011; Levinson et al., 2005), thus comparisons between patients at the Women’s Clinic and General Wellness Clinic were made.

Healthcare providers from the Women’s Clinic ($n = 5$) and General Wellness Clinic ($n = 17$), specifically those who meet individually with patients, participated in this study. The General Wellness clinic encompasses Family Medicine, Emergency Medicine, and Internal Medicine/Pediatrics. Providers were predominantly female (64.6%) and there was an even split between Doctors of Medicine ($n = 11$) and Physician Assistants.

Procedure and Measures. Patients with an appointment at the Women’s Clinic and General Wellness Clinic were randomly selected to be in either the experimental or control condition. Patients in the experimental condition were primed to be in an autonomous mindset by completing the Patient Pre-Visit Autonomy questionnaire. Patients in the control condition received no prime and completed the Patient Pre-Visit Health Literacy questionnaire.
Following completion of the questionnaire, all patients proceeded to meet with their provider as scheduled. After the visit was over, each patient completed the Autonomy Post-Visit questionnaire. In addition, healthcare providers responded to the Healthcare Provider Post-Visit questionnaire after each patient left. Healthcare providers remained unaware that their patients were completing pre-visit and post-visit questionnaires. All patients were unaware that their providers were completing a questionnaire in response to their healthcare visit. The Autonomy Post-Visit questionnaire and the Healthcare Provider Post-Visit questionnaire served as Study 2’s dependent variables. All questionnaires completed by patients and providers were embedded into the existing survey structure used by the UHC. Before data analysis was conducted, a healthcare provider de-identified the data to protect patient and provider anonymity and sent the anonymized data the main researcher via a secure and password protected platform.

**Autonomy Pre-Visit Questionnaire.** This 10-item Likert scale ($1 = \text{Disagree}, \ 4 = \text{Agree}$) was designed to prime patients to have an autonomous mindset and behave autonomously prior to meeting with their healthcare provider. This form of prime most closely resembles that of directed thought (see Kay, Wheeler, & Smeesters, 2008, Study 3). Each question was designed to make patients think about autonomy in relation to healthcare as well as healthcare provider support of patient autonomy. Items can be grouped into two constructs: (1) desire for autonomy and (2) provider support of autonomy. An additional question regarding time spent with a healthcare provider was also included. All items can be seen on the left side of Table 2.

**Health Literacy Pre-Visit Questionnaire.** This questionnaire was administered to patients randomly assigned to the control condition (the no-prime condition). The scale was adapted from the 16-item Health Literacy Screening questionnaire (Chew, Bradley, & Boyko, 2004). The first
10 items were used in order to match the number of items included in the Autonomy Pre-Visit Questionnaire.

**Autonomy Post-Visit Questionnaire.** This 10-item Likert type survey \((1 = \text{Disagree}, \ 4 = \text{Agree})\) served as one dependent variable for Study 2. Items on this scale can be grouped to represent: (1) how autonomous the patient was during the visit, and (2) how autonomy supportive the healthcare provider was during the visit. An additional item on adequacy of time spent with the healthcare provider was included in order to examine potential differences between the experimental and control condition.

Higher scores on items related to the patient’s autonomous behavior indicate the patient believed they behaved autonomously (scores may range between 3-12) and higher scores on items related to provider support of autonomy indicate the patient believed their provider supported their autonomy (scores may range between 6-24). All scale items were made to be parallel to those in the Pre-Visit Autonomy questionnaire—reworded to be in past tense. The right side of Table 2 contains all items and overall scale reliability was strong, \(\alpha = .91\)

**Healthcare Provider Post-Visit Questionnaire.** This 5-item Likert type scale \((1 = \text{Disagree}, \ 4 = \text{Agree})\) served as the second dependent variable. These items assess the extent to which healthcare providers believed to have supported patient autonomy, their perception of delivering understandable information, and the adequacy of time spent with that patient (Table 3 depicts the complete scale). The time question was included for two reasons: to compare between patient opinions of time spent with the provider and because healthcare providers have expressed reluctance to engage in PCC and SDM arguing it is time-consuming (Barr & Durand, 2016).

High scores on items related to autonomy support indicate that providers believed they supported patient autonomy (scores may range between 3-12), a high score on the item related to
understandable communication indicate the provider believed they communicated clearly, and a high score on the item related to time indicate the provider felt they had enough time to discuss medical information with their patient. Overall scale reliability was poor, $\alpha = .15$.

**Results**

Of the 248 patients who participated in the study, 82.3% of responses came from patients who made an appointment at the General Wellness Clinic. There was a relatively even split of patients between the two conditions, with 49.6% receiving the autonomy prime through the Autonomy Pre-Visit questionnaire.

An independent samples $t$-test was conducted on the mean values of items reflecting level of autonomy in the Autonomy Post-Visit questionnaire to compare between the autonomy-prime and control conditions. Patients showed little difference in reported autonomy (Autonomy prime $M = 11.42, SD = .99$; Control $M = 11.39, SD = 1.16$), and this difference was not statistically significant, $t(246) = .22, p = .823$. These results indicate the attempt to prime greater autonomy in patients was unsuccessful, as all patients reported having high autonomy following the healthcare visit.

A second independent samples $t$-test was conducted on the mean values of items that reflect provider autonomy support in the Autonomy Post-Visit questionnaire to compare between patients in the autonomy prime and control conditions. Patients showed little difference in reported provider support of autonomy (Autonomy prime $M = 22.98, SD = 2.27$; Control $M = 23.3, SD = 1.84$), and this difference was not statistically significant, $t(246) = -1.25, p = .212$. In other words, patients did not report differences in healthcare provider support of their autonomy, as all providers appeared to engage in equal amounts of SDM.
Women’s Clinic patients showed little difference from General Wellness Clinic patients in both their post-visit reports of autonomy (Women’s Clinic $M = 11.43, SD = .90$; General Wellness Clinic $M = 11.40, SD = 1.12$) and post-visit reports of provider autonomy support (Women’s Clinic $M = 22.20, SD = 2.08$; General Wellness Clinic $M = 23.19, SD = 2.06$). These differences were not statistically significant (independent $t$-test $p$-values $> .05$) suggesting that patients in both clinics had equal feelings of autonomy and experienced equal amounts of autonomy support from providers.

Finally, healthcare providers in the Women’s Clinic and General Wellness Clinic had nearly identical responses to the three Healthcare Provider Post-Visit questions related to autonomy support (Women’s Clinic $M = 12, SD = 0$; General Wellness Clinic $M = 11.98, SD = .16$), and there was no statistical difference between clinics, $t(246) = .62, p = .543$. In other words, healthcare providers perceived themselves equally in terms of their engagement in autonomy support.

There was also no statistical difference between providers rating of time spent with each patient (Women’s Clinic $M = 4, SD = 0$; General Wellness Clinic $M = 3.99, SD = .07$) or patient understanding (Women’s Clinic $M = 3.59, SD = .79$; General Wellness Clinic $M = 3.99, SD = .12$) with $p$-values greater than .05 by independent samples $t$-tests. Furthermore, there was no statistical difference between patients (Autonomy prime $M = 3.84, SD = .47$; Control $M = 3.88, SD = .39$) or clinic (Women’s Clinic $M = 3.77, SD = .64$; General Wellness Clinic $M = 3.87, SD = .37$) regarding time spent with their healthcare provider, with $p$-values greater than .05 by independent samples $t$-tests. In other words, all patients reported having enough time with their provider to discuss their opinions and feelings regarding treatment options.
Discussion

To summarize, the attempt to prime patients into a more autonomous mindset was unsuccessful—there was no difference in personal autonomy scores between those who received the prime and those who did not, regardless of clinic or condition. The ceiling effect, or a large proportion of participant responses near the maximum limit for a specific measure, observed in Study 2 could be explained by a high level of autonomy within the sample.

Young people (Deber et al., 2007; Ende et al., 1989; Hözel et al., 2013; Thompson et al., 1993) and those receiving higher education (Arora & McHorney, 2000; Cullati et al., 2011; Deber et al., 2007; Hözel et al., 2013; Levinson et al., 2005) tend to desire greater amounts of autonomy in medical situations. As such, the prime could have been unsuccessful in inducing an autonomous mindset because participants might have already been in one. It would be valuable to extend this study by applying it to different patient populations, such as older adults with low education or young adults with low education. This would allow researchers to identify patient types who could potentially benefit from being reminded of their autonomy prior to their healthcare visit.

No difference between condition or clinic in patient reports of provider engagement in autonomy supportive behaviors were observed. In other words, healthcare providers in this study engaged in the same type of autonomy supportive behaviors characterized by SDM across patients. This finding is heartening given previous evidence that some healthcare providers consider PCC and SDM to be time consuming (Barr & Durand, 2016) and that healthcare providers engage differently among their patients (van Ryn, 2002). However, given that the present sample of patients appeared highly autonomous, it could be that the healthcare providers are accustomed to supporting patient autonomy. It would be advantageous, then, to extend this
study into different samples of healthcare providers. For example, healthcare providers working in emergency rooms, teaching hospitals, and live-in residencies likely have different patient types and may subsequently have varying degrees of autonomy supportive behavior and attitudes toward patient autonomy.

The Healthcare Provider Post-Visit questionnaire should be discussed in relation to its poor reliability, range restriction of responses, and item content. Poor reliability is unsurprising given the scale’s length; longer scales tend to have higher alpha levels (Cortina, 1993; Kline, 2005). The scale may not have been long enough to fully address the constructs of interest. Additionally, the restricted range and apparent ceiling effect of provider responses likely prevented detection of statistically significant differences and may have also affected alpha (Guion, 2011; Sackett, Laczo, & Arvey, 2002). It is possible that demand characteristics influenced healthcare provider responses. Scale items were worded in a way that may have led healthcare providers to respond in agreement as opposed to disagreement. Additional work is needed to improve the Healthcare Provider Post-Visit questionnaire’s item content and reliability.

Although the present study did not work how it was intended, valuable information was still obtained. First, college students may have high enough autonomy that placing them in an autonomous mindset prior to their healthcare visit would be ineffective. The same cannot be said about different patient populations. Furthermore, healthcare providers at university settings may engage in autonomy supportive behavior through SDM more consistently because of their highly autonomous patients. This does not mean that healthcare providers in different hospital settings have a similar level of engagement, and further work should be done to uncover whether different healthcare specialists are as supportive as the present sample of providers.
CHAPTER 4
GENERAL DISCUSSION

The present research extended upon past findings that patients and healthcare providers have different opinions and perceptions related to certain elements of healthcare. The present research also examined whether priming an autonomous mindset in patients prior to the healthcare visit resulted in greater levels of autonomous behavior and autonomy support from healthcare providers.

Study 1 examined a potential gap between healthcare provider and patient perceptions in relation to patient autonomy and healthcare provider support of autonomy. Results of this study provide preliminary evidence that a gap does exist, specifically within patient feelings of autonomy and healthcare provider support of patient autonomy through the practice of SDM. Patients felt more autonomous than healthcare providers perceived them to be, and patients reported less autonomy support from healthcare providers compared to healthcare provider reports of autonomy support. To gain a more complete understanding of how healthcare related autonomy is perceived, researchers may consider applying this study to a more diverse sample of patients and healthcare providers.

Until this point, perceptions of patient autonomy and healthcare provider support of patient autonomy had not been obtained from both a patient and provider sample. Previous research has been concerned solely with patient feelings of and desire for autonomy—this study goes further by asking patients to report on provider support of autonomy while also obtaining healthcare provider responses to questions related to both patient autonomy and healthcare
provider support of patient autonomy. The results of Study 1 raise a myriad of questions. Why do healthcare providers and patients have different perceptions of autonomy and autonomy support? How does this mismatch affect the patient-provider interaction? Is this mismatch present across different patient or healthcare provider types? Answering these questions would offer further insight into the provider-patient relationship for steps to be taken to close the apparent gap in perceptions.

Study 2 examined whether patients could be primed to be more autonomous and if healthcare providers engaged in equal amounts of autonomy supportive behavior across patients who received the prime and patients who did not receive the prime. The study failed to produce changes in autonomous behavior among patients. Patients in both the experimental and control conditions reported extremely high levels of autonomy in their post-visit responses. Furthermore, patients in both conditions reported receiving high levels of autonomy support from their healthcare provider. Though these results are heartening, they may not hold across a more diverse sample of patients and healthcare providers, especially when considering reports of healthcare providers viewing autonomy support through the practice of SDM as time-consuming (Barr & Durand, 2016). Therefore, it would be advantageous for this study to be applied in different settings. In doing so, researchers could identify which patient populations would be better served by a reminder of their autonomy prior to a healthcare visit and which healthcare providers are more (less) likely to engage in autonomy supportive behavior.

In conclusion, it appears a mismatch exists between patient and healthcare provider opinions regarding patient autonomy and healthcare provider support of patient autonomy. Though this gap was evident in a sample of college-age students, examining whether these discrepancies are apparent in other populations is an important avenue for future research.
Although the attempt to prime patients to feel more autonomous was unsuccessful, the obtained patient sample had a generally high level of autonomy. Thus, it is unwise to assume the present findings would replicate across a more diverse sample.

The United States healthcare system has come a long way; it has abandoned the practice of medical paternalism by largely replacing it with patient-centered care, and it also emphasizes the importance of SDM to support patient autonomy. However, the system is not perfect; evidence suggests healthcare providers do not all perceive PCC and SDM as advantageous, and healthcare providers and patients are not always on the same page regarding aspects of patient care. The provider-patient relationship is an essential component in promoting positive behavior change in patients; therefore, it is critical more research is done to assess and curtail the apparent disparities within healthcare practice.
Table 1. Patient Autonomy Questionnaire and Healthcare Provider Autonomy Questionnaire.

<table>
<thead>
<tr>
<th>Patient Autonomy Questionnaire</th>
<th>Healthcare Provider Autonomy Questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient desired autonomy</strong></td>
<td><strong>Healthcare provider perception of patient desired autonomy</strong></td>
</tr>
<tr>
<td>I am up-front when discussing my feelings about possible medical</td>
<td>In general, my patients are up-front about their feelings toward potential</td>
</tr>
<tr>
<td>treatment.*</td>
<td>treatment options.*</td>
</tr>
<tr>
<td>I prefer my clinicians to give me a lot of information so I can</td>
<td>In general, my patients ask for a lot of information prior to making a</td>
</tr>
<tr>
<td>fully participate in deciding what treatment plan is best for me.*</td>
<td>decision.*</td>
</tr>
<tr>
<td>Clinicians should encourage me to be involved when discussing a</td>
<td>In general, my patients express the desire to have significant input in</td>
</tr>
<tr>
<td>medical decision by asking for my input.</td>
<td>decisions affecting their health.</td>
</tr>
<tr>
<td><strong>Patient perception of past clinician autonomy support</strong></td>
<td><strong>Healthcare provider autonomy support</strong></td>
</tr>
<tr>
<td>My clinicians have given me enough information to make decisions</td>
<td>I provide my patients with understandable information so they can make</td>
</tr>
<tr>
<td>about treatment plans that is best for me.*</td>
<td>informed decisions about their treatment.*</td>
</tr>
<tr>
<td>My clinicians have encouraged me to take part in discussing</td>
<td>I encourage my patients to be involved when we discuss potential treatment</td>
</tr>
<tr>
<td>medical treatment.*</td>
<td>plans.*</td>
</tr>
<tr>
<td>My clinicians have asked how I felt about various medical</td>
<td>I ask my patients how they feel about various treatment options.*</td>
</tr>
<tr>
<td>treatment.*</td>
<td>My patients generally see me as a partner in their own health decisions.</td>
</tr>
<tr>
<td>My clinicians have asked for my input when discussing possible</td>
<td></td>
</tr>
<tr>
<td>medical treatment.</td>
<td></td>
</tr>
<tr>
<td>My clinicians have incorporated my feelings into discussions of</td>
<td></td>
</tr>
<tr>
<td>possible treatment plans.</td>
<td></td>
</tr>
<tr>
<td>My clinicians have listened to me when I have expressed my</td>
<td></td>
</tr>
<tr>
<td>feelings about potential medical treatment.</td>
<td></td>
</tr>
<tr>
<td>Patient understanding of health information</td>
<td>Healthcare provider perception of patient understanding</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------------------------------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>In general, I am better able to understand differences in medical treatment options after talking with my clinician.*</td>
<td>My patients are better able to understand differences in medical treatment options after talking with me.*</td>
</tr>
<tr>
<td>My clinicians have explained differences between treatment plans in ways I can understand.</td>
<td>My patients feel confident in the treatment plan at the end of their visit.</td>
</tr>
</tbody>
</table>

* Parallel items used to create averages for comparison between student-patients and healthcare providers
Table 2. Patient Pre-Visit Questionnaire and Patient Post-Visit Questionnaire.

<table>
<thead>
<tr>
<th>Autonomy Pre-Visit Questionnaire</th>
<th>Autonomy Post-Visit Questionnaire</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Patient desired autonomy</strong></td>
<td><strong>Patient reported autonomy</strong></td>
</tr>
<tr>
<td>I prefer it if my clinician lets me make my own decisions about medical treatment plans.</td>
<td>My clinician let me make my own decisions about a medical treatment plan.</td>
</tr>
<tr>
<td>I prefer if my clinicians to give me a lot of information so I can fully participate in deciding what treatment plan is best for me.</td>
<td>My clinician gave me a lot of information so I could fully participate in deciding what treatment plan is best for me.</td>
</tr>
<tr>
<td>I am up-front when discussing my feelings about a given treatment option</td>
<td>I was up-front with my clinician when discussing my feelings about a medical decision.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Provider support of autonomy</th>
<th>Patient reported autonomy support</th>
</tr>
</thead>
<tbody>
<tr>
<td>My clinician should enable me to make my own decisions about treatment options by providing me with sufficient information related to each treatment.</td>
<td>My clinician enabled me to make my own decisions about a treatment option by providing me with sufficient information.</td>
</tr>
<tr>
<td>My clinician should encourage me to be involved when making a medical decision.</td>
<td>My clinician encouraged me to be involved when discussing a medical decision.</td>
</tr>
<tr>
<td>My clinician should listen to me when I express my opinions and feelings about a given treatment plan.</td>
<td>My clinician listened to me when I expressed my opinions and feelings about medical treatment.</td>
</tr>
<tr>
<td>My clinician should incorporate my feelings into discussing a treatment plan.</td>
<td>My clinician incorporated my feelings into discussing a treatment plan.</td>
</tr>
<tr>
<td>My clinicians should explain differences between treatment plans in a way I can understand.</td>
<td>My clinician explained differences between treatment options in a way I could understand.</td>
</tr>
<tr>
<td>After talking with my clinician, I should feel confident in my ability to understand the differences between potential treatment plans.</td>
<td>After talking with my clinician, I feel confident in my ability to understand differences between treatment options.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Time spent with healthcare provider</th>
<th>Patient reported time spent with healthcare provider</th>
</tr>
</thead>
<tbody>
<tr>
<td>I should have enough time with my clinician to thoroughly discuss my opinions and feelings about a given treatment plan.</td>
<td>I felt I had enough time with my clinician to thoroughly discuss my opinions and feelings about a given treatment plan.</td>
</tr>
</tbody>
</table>
Table 3. Provider Post-Visit Questionnaire

**Healthcare Provider Post-Visit Questionnaire**

**Provider support of patient autonomy**

*I provided my patient with understanding information so they can make an informed decision about their treatment.*

*I encouraged my patient to be involved when making a medical decision by asking for his or her input.*

*I thoroughly explained information in a way my patient could understand.*

**Provider perception of patient understanding**

*My patient fully understood their treatment plan.*

**Time spent with patient**

*I felt I had enough time to thoroughly discuss my patient’s opinions and feelings about the treatment plan.*
REFERENCES


Levinson, W., Kao, A., Kuby, A., & Thisted, R. A. (2005). Not all patients want to participate in decision making. *Journal of General Internal Medicine, 20*(6), 531-535


