

Running head: PRESCRIPTIVE AUTHORITY FOR NEW JERSEY PSYCHOLOGISTS
PRESCRIPTIVE AUTHORITY FOR NEW JERSEY PSYCHOLOGISTS:
A BAYESIAN APPROACH TOWARD UNDERSTANDING THE ROLE OF
INFORMATION IN THE DEVELOPMENT OF ATTITUDES

A DISSERTATION
SUBMITTED TO THE FACULTY
OF
THE GRADUATE SCHOOL OF APPLIED AND PROFESSIONAL PSYCHOLOGY
OF
RUTGERS - THE STATE UNIVERSITY OF NEW JERSEY

BY
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IN PARTIAL FULFILLMENT OF THE
REQUIREMENTS FOR THE DEGREE

OF
DOCTOR OF PSYCHOLOGY

NEW BRUNSWICK, NEW JERSEY

OCTOBER 2017

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Abstract

As an increasing number of state legislatures consider granting prescriptive authority to qualified psychologists (RxP), it is important for the field of professional psychology to examine our own professional community's opinions and attitudes toward this policy area (McGrath, 2010). In addition to examining attitudes and beliefs about RxP, this study examines: (a) if exposure to RxP-related information influences one's opinion toward RxP; (b) how psychology graduate students and psychologists utilize information related to RxP; (c) reasons for supporting/opposing RxP; and (d) differences between students' and psychologists' beliefs about RxP. A Bayesian Informal Argumentation approach is utilized to quantitatively measure how subjects evaluate RxP-related information in terms of believability and utility. Two-hundred and seventy-one participants gathered from New Jersey psychology doctoral programs and various professional psychology listservs completed the online survey developed for this study. Findings suggest that the psychology community remains relatively divided on the issue of RxP, with most not interested in pursuing certification for RxP and most reporting that they are not knowledgeable on the topic. Despite there being significant differences between how students and psychologists evaluate RxP information, the Bayesian Informal Argumentation approach proved to not be an ideal measure for how subjects evaluate information on this topic. However, data regarding participants' evaluations of information and reasons to oppose/support RxP provide insight into the values and opinions of members of the psychology community. Implications for RxP stakeholders and limitations of the study are discussed.

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ACKNOWLEDGEMENTS

I extend my sincerest appreciation to Dr. Daniel Fishman, my dissertation chairperson and academic advisor, for guiding me through the dissertation process and encouraging me to integrate my interests in psychology and public policy. This dissertation would not have been possible without your mentorship and support. I would also like to thank Dr. Jamie Walkup for serving on my dissertation committee and assisting with the development of my dissertation's design and statistics. I truly appreciate your dedication and thoughtful feedback.

I would also like to take this opportunity to thank my girlfriend, Mary. With your love and support, you have made the task of completing my dissertation as enjoyable as completing a dissertation could possibly be. Thank you for always being there for me and knowing how to put a smile on my face.

Lastly, but certainly not least, I would like to thank my family. To my mother: Thank you for your unconditional love and instilling in me the importance of education and pursuing my interests. To my father: Thank you for fostering my interest in policy and teaching me the importance of a lively debate. Finally, to my sister and brother: Thank you for being the best siblings anyone could ask for. Your love and humor have carried me through these 27 years.

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Chapter 1:

Literature Review

Prescriptive Authority for Psychologists

Significant changes within the practice of professional psychology have occurred in the 65 years since the American Psychological Association (APA) first established standards for clinical training (Hilgard et al., 1947). These changes included the development of alternative training models (i.e., practitioner-scholar), establishment of licensure laws, authorization of third-party payments, and the proliferation of psychological specialties (i.e., neuropsychology). Each of these aforementioned amendments have had dramatic impacts on the broader field of psychology while still maintaining the core principle of treating patients with the goal of alleviating psychological or emotional suffering. However, many argue that the contemporary issue of prescriptive authority for psychologists (hereunto referred to as RxP) would perhaps be the most significant reshaping of psychologists' role in mental healthcare (McGrath, 2010).

RxP refers to the legal authorization of qualified psychologists to prescribe limited psychotropic medications under the supervision of a psychiatrist or other prescribing professional. Traditionally, general practice physicians and psychiatrists most commonly prescribe psychotropic medications in addition to a few other medical professions (e.g., nurse practitioners, physician assistants). State-based legislative efforts for RxP seek to add psychologists to the list of other non-physician prescribers by advocating that doctoral-level psychologists should be able to legally prescribe after

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completing additional coursework and clinical training in psychopharmacology and passing a certification examination. The training and credentialing criteria vary significantly depending on the state (McGrath, 2010).

The History of RxP

The founder of clinical psychology, Lightner Witmer, established the first psychological services clinic in Philadelphia in 1896 with the goal of helping children with learning disabilities. While the field of clinical psychology was still in its infancy, practicing psychology was defined as the application of psychological principles for the purpose of studying the individual (Lavoie & Fleet, 2002). However, until World War II, clinical psychology was almost entirely an academic discipline. Due to the devastating psychological impacts of World War II, the demand for mental health services on behalf of the Veteran's Administration increased dramatically. Thus, the scope of a psychologist's practice expanded to incorporate psychometrics, interpretation of aptitude, intelligence and personality tests, diagnostic interviewing, and psychotherapy supervised by a psychiatrist (Miller, 1946).

In 1947, APA's Committee on Training in Clinical Psychology (CTCP) did not emphasize training in the rendering of direct psychological interventions to patients (Gilgen, 1982). Training programs instead emphasized training psychologists to be scientists steeped in research, psychodiagnostic testing, and studying general psychological principles. Regardless of the CTCP intentions, a large portion of clinical psychologists instead wanted psychotherapy to be the focus of their practice. Furthermore, psychologists advocated to gain the authority to practice psychotherapy

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without being required to be supervised by a psychiatrist. Despite psychiatrists' concern that psychologists lacked the adequate psychotherapy training, psychologists gained the authority through State professional licensing to independently practice psychotherapy by the end of the 1950s (Gilgen, 1982).

The first national training conference on clinical psychology, held in Boulder, Colorado in 1949, shifted APA's CPCT by establishing equal training emphases on research and clinical competencies – the *scientist-practitioner* model (Norcross & Castle, 2002). This conference was also significant in that it formally established the doctor of philosophy (Ph.D.) degree as a requirement to be a psychologist and the “Boulder Model” as the predominant training model (Norcross & Castle, 2002).

The Boulder model reigned for 14 years until 1973, when at a training conference in Vail, Colorado, advocates argued that psychological research had progressed enough to a point where direct training programs for professional, clinically-oriented psychologists were merited. The Vail Conference established the *scholar-practitioner* training model where clinical training is emphasized and the extent of research training focuses predominantly on becoming a competent and knowledgeable consumer of psychological research. This model also added the Doctor of Psychology (Psy.D.) degree to the list of acceptable degrees to be licensed as a psychologist (Norcross & Castle, 2002).

The first significant event to occur that initiated the effort to further expand psychologists' scope of practice into the field of psychopharmacology was arguably APA's official support. In 1981, a taskforce from the APA Board of Professional Affairs released a statement predicting that there would be an increased demand for

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psychologists providing physical interventions (McGrath, 2010). The Board specified that such physical interventions “is within the scope of practice of psychology so long as its use is (a) healthcare-related and intended to improve assessment or treatment; (b) within the scope of the practitioner’s competence as a result of appropriate training, supervision, and experience; and (c) justified in terms of the welfare of the consumer” (American Psychological Association Board of Professional Affairs, 1981).

This conceptual shift regarding physical interventions was later echoed in another taskforce five years later (American Psychological Association Board of Professional Affairs, 1986). The report signified consistency in the APA’s thinking about psychologists’ scope of practice. For example, APA traditionally considered psychologists’ scope of practice to be based primarily on psychosocial interventions. This conceptual shift was significant in that it incorporated *any* intervention relating to the treatment of mental illness as long as the psychologist has achieved sufficient training and practice in that specific intervention, including prescribing psychotropic medication (McGrath, 2010) Contributing to APA’s shift was also the general trend towards a biopsychosocial understanding of the treatment of mental illness (Engel, 1977).

In 1984, the RxP movement entered into national politics. Senator Daniel Inouye (Democrat-Hawaii) gave a presentation to the Hawaii Psychological Association advocating for the Association to actively pursue RxP in the state of Hawaii. Senator Inouye, who was often regarded as an advocate for mental health issues, argued that RxP should be pursued as means to address what he viewed as a dearth of appropriately trained prescribers in the state of Hawaii. His presentation inspired RxP considerations that reverberated from the Hawaii Psychological Association to the APA, which led to

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the development of the APA task force on psychopharmacology in 1990. Five years later, APA officially adopted the support of RxP as the official policy (Fox, 2003).

Partly due to Senator Inouye's advocacy for RxP, Congress funded a pilot program in 1989 to train psychologists working in the Department of Defense to prescribe. The program was entitled the Psychopharmacology Demonstration Project (PDP). Due to opposition from psychiatrists, PDP did not officially begin until 1991. After program initiation, the curriculum underwent frequent revisions. The last iteration required 660 academic contact hours during the first year of the training program. The second year involved direct training through clinical contact with at least 100 patients. However, due to continued controversy, PDP was cancelled after six years in 1997 (McGrath, 2010).

During the time that PDP was operational, it was independently evaluated four times for feasibility, financial costs, necessity, and outcome performance. Vector Research Inc. conducted a feasibility study (1996). In addition to establishing feasibility, this study also concluded that the cost of training psychologists to prescribe would be less than employing physicians to prescribe. The United States General Accounting Office (GAO) conducted an evaluation assessing the costs and need for PDP in 1997. Their findings indicated that the cost for training psychologists to prescribe was excessively high. The GAO also concluded that at that time there was not a shortage of psychiatrists that would require prescribing psychologists (United States General Accounting Office, 1997). Unsatisfied with the GAO's findings, APA funded a private costs-and-needs evaluation and argued that the GAO's report was misleading considering that both startup costs and program evaluation costs were factored into their analysis (McGrath, 2010).

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The second GAO report focused predominantly on evaluating the performance of the psychologists who graduated from the PDP training program and costs. Completed in 1999, the report noted consistently positive appraisals from supervising physicians and again reported higher costs than standard practice, although lower than the first report (United States General Accounting Office, 1999). The final report was commissioned by the American College of Neuropsychopharmacology, which evaluated PDP between 1991 and 1998. The conclusions noted the absence of a single significant adverse event from the treated patients, that prescribing psychologists filled critical needs within the DoD, and that the generalizability of the PDP results were limited, considering various factors (American College of Neuropsychopharmacology, 1998).

While the DoD was exploring RxP through PDP, APA's previously mentioned task force of 1990 was also underway. One of the most important results of the task force was the development of psychopharmacology training levels 1, 2, and 3 (McGrath, 2010). Level 1 represents a basic understanding of psychopharmacology, which requires one course of 3 to 5 credits in order to prepare psychologists for working in a healthcare setting (Kilbey et al., 1995). Level 2 training existed as a postdoctoral curriculum, training psychologists to work collaboratively with prescribing professionals helping to manage medications and develop treatment plans (Am. Psychol. Assoc. Board Educ. Affairs Working Group Psychopharmacol. Educ. Training, 1997). Lastly, level 3 was the model postdoctoral curriculum for training psychologists to prescribe, as officially adopted by the APA (Am. Psychol. Assoc. Council Rep., 1996) and later revised in 2006. The most current curriculum consists of 400 didactic hours and clinical training consisting of at least 100 patients. Level 3 also set prerequisites of being a licensed

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psychologist and successful completion of coursework in biochemistry, anatomy, and physiology. Soon after, several universities established level 3 training programs for psychologists interested in pursuing prescription privileges in addition to APA establishing the licensing examination for prescribing psychologists – the Psychopharmacology Examination for Psychologists (PEP) (McGrath, 2010).

The first state legislature that recognized prescribing psychologists was Indiana in 1993 by extending the licensing law for psychologists to allow graduates of the PDP program to prescribe within the state [see Indiana Code 25-33-1-2(c)]. This amendment was largely symbolic since to date there have not been any psychologists who have prescribed in Indiana. In 1999, the United States territory of Guam became the first jurisdiction to expand prescription privileges to psychologists by adopting a physician's assistant model for prescribing psychologists (Guam Public Law 24-329). The law required psychologists to establish a collaborative agreement with the patient's physician before prescribing (McGrath, 2010).

The first state to pass RxP legislation was New Mexico in 2002 (New Mexico Administrative Code 16.22.20-16.22.29), and it was closely followed by Louisiana in 2004 (Louisiana Revised Statutes 37:2371-2378). In terms of didactic requirements, the two laws are relatively similar despite the difference that Louisiana licensing laws require that candidates' didactic training result in a master's degree in psychopharmacology. The laws, however, differ more in terms of what clinical experiences are required. For example, a licensed psychologist in Louisiana who has completed the didactic component and passed the PEP exam is eligible to immediately begin prescribing to patients. The APA level 3 suggestion of a supervised clinical practicum was supplanted by requiring

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that psychologists must consult with the patient's primary care physician before dispensing or altering a prescription. In contrast, the New Mexico law requires an 80-hour practicum in clinical assessment and pathophysiology in addition to a 400-hours/100-patient practicum supervised by a physician. Upon completing these practica, the psychologist earns a conditional prescribing certificate which requires two additional years of supervised prescribing experience before earning an independent prescription certificate (McGrath, 2010).

The state of Illinois passed a more restricted RxP law in 2014. The didactic component of training is more intensive, requiring at least 60 credit hours of instruction. Training also involves a 14-month clinical practicum supervised by a physician. After the psychologist passes the PEP, collaboration with the patient's primary care physician is required. Prescribing psychologists in Illinois are also restricted from prescribing to patients under the age of 17 years or over the age of 65 years and cannot prescribe benzodiazepines or psychostimulant medications. Unique to the Illinois law is the ability granted to clinical psychology doctoral programs to integrate psychopharmacology into the curriculum in order to be used towards the didactic requirements for prescription privileges (see Illinois Public Act 098-0668).

Most recently, Iowa and Idaho became the fourth and fifth states to enact RxP legislation in May 2016 and April 2017, respectively. Both bills are less restrictive than the Illinois RxP law. Prescribing certification requirements include: having a master of science degree in clinical psychopharmacology, a supervised practicum in clinical assessment and pathophysiology, and passing the PEP. If psychologists want to prescribe independent from a collaborative relationship with a physician, the psychologist must

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complete a two year conditional prescribing period under a licensed physician's supervision. If psychologists want to prescribe to special populations (e.g., children, elderly, patients with comorbid conditions), one of the supervised conditional prescribing training years must include working with these special populations. In Iowa, psychologists must maintain a collaborative relationship with a licensed physician when prescribing to these special populations (see Iowa Senate File 2188 and Idaho House Bill 212).

Arguments Supporting RxP

One of the primary arguments of RxP advocates is that allowing qualified psychologists to prescribe would improve both the access to and quality of mental healthcare. Proponents argue that the quality of the United States healthcare system in its current form is not meeting the mental health needs of the general population (Norfleet, 2002). Supporting their argument is their claim that there is a shortage of qualified psychiatrists that is unable to meet the needs of the population. Rao (2003) noted a 36.5% decrease in the number of medical students choosing to specialize in psychiatry between the years of 1992 and 2000. Although the number of medical students choosing the specialty of psychiatry increased by 13% in 2015 when compared to 2014, psychiatry specialization has continued to trend downward throughout the 2000s (Moran, 2015). A shortage of psychiatrists is particularly problematic in more rural areas where patients may have to travel long distances for psychiatric care (Hartley et al., 1999). RxP proponents argue that granting prescription privileges to qualified psychologists would

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adequately address both the problems of a dwindling psychiatry workforce and the lack of access to psychiatric care in rural regions (Norfleet, 2002).

RxP advocates also argue that prescribing psychologists would improve the overall quality of mental healthcare. The statistic that is often cited is that non-psychiatric physicians prescribe 75% of psychotropic medications to patients (Wang et al., 2006). Proponents argue that it is a major healthcare concern that a majority of psychotropic medications are being prescribed by physicians who do not specialize in psychotropic medications or mental healthcare. In contrast, psychologists are highly-trained mental health professionals with which psychopharmacological training is a natural extension of their proficiency and would thus provide a better quality of care for patients. RxP would arguably also improve continuity of care and provide a “one-stop-shop” for patients rather than having to consult with two professionals. It is argued that this increased efficiency would also reduce healthcare costs for both consumers and insurance companies (Lavoie & Barone, 2006).

One of the unofficial slogans for supporters of RxP has been, “The power to prescribe is the power to *not* prescribe or *unprescribe*.” This phrase suggests that one of the benefits of allowing psychologists to prescribe is that it will reduce the frequency of overmedication and polypharmacy (Am. Psychol. Assoc. Div. 55 Task Force Practice Guidelines, 2009). This argument is based on the assumption that prescribing physicians often have little to no training on the option of psychosocial interventions and are thus more likely to always recommend medication as the sole form of treatment. Supporters argue that by allowing psychologists to prescribe, patients will benefit since both

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psychosocial and medication options will be considered and thus providing a best-care healthcare experience (McGrath, 2010).

Arguments Opposing RxP

There are opponents to RxP in both the medical and psychology fields, arguing against RxP in ways that both differ and overlap. One of the most commonly cited arguments by opponents is that psychologists are not qualified to prescribe, even with additional training in psychopharmacology (American Psychiatric Association, 2003). The issue of qualifications is often connected to the issue of safety for patients who are having psychotropic medications prescribed to them by psychologists. Opponents of RxP argue that the APA training model is both substandard and insufficient to ensure safe prescribing. It is estimated that the APA model requires less than half of the necessary medical training that other prescribing professionals complete (Heiby, DeLeon, & Anderson, 2004). Furthermore, opponents argue that citing the absence of reported adverse events from prescribing psychologists is not sufficient proof that psychologists are able to safely prescribe. Thus, it is argued that the absence of safety data in addition to substandard training creates an unsafe prescribing environment that potentially endangers patient health (Psychologists Opposed to Prescription Privileges for Psychologists, 2007).

A second commonly-used argument against RxP is that there is not a societal need to grant psychologists the authority to prescribe when factoring in the number of psychiatrists and the other professionals who can safely prescribe psychotropic medications. Opponents refute the proponents' claims that expanding prescriptive

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authority to include psychologists would expand access to care for those living in more rural areas, stating that psychologists and psychiatrists tend to practice in similar, urban regions (Psychologists Opposed to Prescription Privileges for Psychologists, 2007).

Opponents also state that because there is not yet a consensus about RxP among the community of professional psychologists, more thought and research within the community should precede any legislation to dramatically alter psychologists' role in mental healthcare (Lavoie & Barone, 2006).

One of the final arguments used against RxP is more often used by psychologists who oppose RxP. These opponents are concerned that financial and logistical pressures resultant from RxP will dramatically alter psychology doctoral and post-doctoral programs. The same pressures that contributed to psychiatry's emphasis on psychopharmacology rather than psychotherapy would arguably be replicated with psychologists. Thus, it is argued that RxP would force these training programs to incorporate more psychopharmacology and physiology courses at the expense of the more traditional courses on psychosocial interventions and theory (Hayes and Heiby, 1996). To many psychologists and other professionals who value psychosocial interventions, this shift in focus would be detrimental to both society's mental health needs and the profession of psychology (Lavoie & Barone, 2006).

Prior Research on RxP Attitudes

There have been several surveys of psychologists' attitudes of RxP over the past thirty years since the issue first arose. Initially, a consistent majority of psychologists opposed RxP. The earliest published survey was from 1981 when Bascue and Zlotowski

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(1981) surveyed psychologists in the National Register of Health Service Providers. Their results indicated that a majority of surveyed psychologists (58%) opposed granting qualified psychologists the authority to prescribe.

Relatedly, two other studies conducted by Boswell, Litwin, and Kraft (1988) and Litwin and Boswell (1989) found that 51% and 49%, respectively, of survey participants did not support the idea of APA advocating for prescription privileges for psychologists. Approximately 27% of survey respondents in both surveys supported the idea of APA advocating this issue on behalf of psychologists. Surveys of Hawaii and Georgia psychologists were analyzed by Piotrowski (1989) and concluded that 25% – 30% of surveyed psychologists supported RxP, 30% - 60% opposed RxP, and 10% - 15% were unsure about their opinion. Lastly, Piotrowski and Lubin (1989) conducted a survey of psychologists who were Division 38 members (health psychology) and found that 30% supported RxP, 61% opposed, and 9% undecided.

The first survey research to yield results indicating majority support was a 1991 task force report regarding the role of clinical child psychologists in the prescribing of psychoactive medication for children (Barkley, Conners, Barclay, Gadow, Gittelman, Sprague, & Swanson). Results indicated that 65% of surveyed child clinical psychologists supported RxP for psychologists willing to undergo specialized training in psychopharmacology while only 34.5% opposed such privileges. Furthermore, 45.4% endorsed an interest in completing additional training in psychopharmacology in order to prescribe while 52.9% reported not being interested. Although this survey represented a marked shift in psychologists' attitudes of RxP, the authors noted that the survey did not

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allow respondents to reply “no opinion,” which might have artificially forced more respondents to choose to support RxP (Barkley et al., 1991).

More recently, four surveys have continued to gauge psychologists’ support for RxP. They include a survey conducted in Maryland (Sammons, Gorny, Zinner, & Allen, 2000), an APA poll (Youngstrom, 1991), a survey conducted online of Canadian psychologists (St-Pierre & Melnyk, 2004), and a survey of clinical psychologists in Oregon (Campbell, Kearns, & Patchin, 2006). In these studies, RxP support was more substantial than prior studies. Support ranged from 67% to 73% while 44% to 57% of psychologists endorsed an interest in pursuing prescriptive authority if it were legalized in their state (Baird, 2007).

To date, there have been two published studies that analyzed groups of RxP survey research (Baird, 2007). Dobson and Dozois (2001) examined several RxP surveys that were published over the time period of two decades. The authors concluded that between the years of 1981 and 1998, RxP support among psychologists has increased by about 8%. The authors noted, however, that there have not been any studies that examined the same group of psychologists using the same measures across a period of time, so the generalizability of their findings is limited. Walters (2001) conducted a meta-analysis of 16 RxP survey research studies. Results indicated that 52% of participants supported RxP while 35% opposed.

Other survey findings have yielded inconsistent results between surveys. For example, an important finding of the aforementioned meta-analysis (Walters, 2001) was that participants who were still in training were more likely to support RxP when compared to psychologists who were further into their careers (Walters, 2001). However,

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this finding was not able to be replicated in Baird's (2007) survey study involving both trainees and practicing psychologists. Another survey found less support among both older psychologists and female psychologists (Massoth, McGrath, Bianchi, & Singer, 1990). However, a similar study conducted several years later found that neither age nor sex correlated with RxP support or opposition (Ferguson, 1997). Another seemingly contradictory finding gathered from RxP survey research is the inferred ambivalence of many psychology trainees and psychologists (Robiner, Bearman, Berman, Grove, Colón, Mareck, & Armstrong, 2002). For example, according to one survey (Ax, Forbes, & Thompson, 1997), although a majority of psychology trainees and psychologists supported RxP, most in this group were not willing to complete the training themselves.

The most recent published survey research of psychologists' opinions regarding RxP was conducted by Baird in 2007. Three hundred and six Illinois psychologists were surveyed, of which 61.2% supported RxP and 30.1% planned to receive the necessary training if RxP legislation were to be passed. When assessing for variables that might influence participant's opinion, results indicated that years of experience, theoretical orientation, and population density of psychologist's county were not significant variables. Other findings indicated that psychologists were overrepresented in most urban counties and underrepresented in the more rural counties in Illinois. Baird (2007) noted that the percentage of psychologists who supported RxP (61.2%) was far greater than those who endorsed a shortage of local physicians (40.9%), suggesting that there are other, unexplored factors that influence a psychologist's decision to either support or oppose RxP. Brentar and McNamara (1991) suggest that a perceived increase in both

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financial compensation and professional esteem might be significant variables, yet have still to be empirically studied.

There appears to be only two published studies that focused exclusively on examining the opinions of psychology graduate students regarding RxP. Tatman, Peters, Grenne, and Bongar (1997) surveyed 302 psychology doctoral students and results indicated that 70% supported efforts to grant psychologists prescriptive authority while 62% stated that they would seek prescriptive authority if it became legal where they live. Luscher et al., (2002) surveyed 421 graduate students from clinical psychology doctoral programs with the purpose of identifying predictor variables for opinions. Results indicated that 55.1% of respondents either agreed or strongly agreed that psychologists should be granted prescriptive authority while 42.5% personally desired the authority to prescribe (Luscher et al., 2002). From a review of the aforementioned studies, issues relating to sampling did not appear to be a factor in the differences in results.

Participants were also asked to rank order a fixed list of the most positive and most negative consequences of RxP. The most popular positive consequence (44.9%) was the belief that psychologists are better trained in psychological theories than other prescribing physicians while the most popular negative consequence (56.3%) was the belief that RxP would fundamentally alter the field of psychology. With regard to predictor variables, the positive belief of RxP being a logical extension of the field and the negative beliefs of concern about malpractice costs and fundamental changes to the field significantly predicted RxP opinions in their respective direction. The authors suggested that future research using a more detailed analysis of factors that influence

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opinions of RxP is needed in addition to understanding the role of information in the development of opinions (Luscher, Corbin, Bernat, Calhoun, & McNair, 2002).

There has been minimal research on the impact of information on psychologists' or psychology graduate students' opinions of RxP. One such study was conducted in 1997 and examined the effects of information relating to the parameters, scope, and rationale of the RxP issue. Participants were attendees of an informational session on RxP at the annual convention of the Illinois Psychological Association in 1993. Thirty-one attendees completed pre-session and post-session questionnaires assessing their opinion of RxP. Results indicated that there was a significant shift in opinion between pre-session and post-session assessments toward greater support of RxP (Pimental, Stout, Hoover, & Kamen, 1997).

There are several limiting factors of the aforementioned study. The small and restricted sample reduces the generalizability of the findings. The possibility of a self-selection bias also exists, in that perhaps those who chose to attend an RxP seminar are more likely to support the cause. Furthermore, the agenda of the RxP session appeared to be biased towards providing positive information regarding RxP, to the exclusion of opposition arguments. This is suggested by the title of the session being "Prescription Privileges for Psychologists: How Far Have We Come and Where Do We Go From Here?" in addition to session foci of training models and recent developments of the RxP "movement" (Pimental, Stout, Hoover, & Kamen, 1997). If an information bias was present, the study finding that exposure to information increases the likelihood of one to support RxP is limited.

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The results from a more recent study utilizing a larger sample contradicted Pimental et al.'s 1997 study. Lucas et al. (2013) surveyed 398 licensed psychologists in the state of Oregon with the aim of assessing attitude and knowledge changes after exposure to information. Results indicated a widespread lack of knowledge about the RxP issue. For example, only 6.5% of participants knew which states currently allow psychologists to prescribe and 70.5% were unfamiliar with the prerequisites of psychopharmacology postdoctoral training. As opposed to Pimental et al.'s study, participants' general support or opposition of RxP remained fairly stable. Instead, results indicated more focused attitude change. For example, following exposure to information, participants were significantly more concerned about the high cost of RxP legislative efforts and a decrease in the belief that RxP would expand access to care in rural areas. The authors suggest that future research should focus on expanding the amount of information given to survey participants (Lucas et al., 2013).

Bayesian Informal Argumentation Approach

A systematic framework for analyzing how people evaluate science arguments has not been formally developed. However, the Bayesian Informal Argumentation Approach to informal argumentation has been suggested to be an appropriate framework for understanding how people develop conclusions after being exposed to scientific arguments. A Bayesian framework suggests that people evaluate the strength of specific arguments probabilistically in relation to the proposed evidence of the claim. This primarily includes quantifying degrees of belief, which refers to one's subjective estimate

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that any particular claim is true. This quantification is thus subjective in nature (Corner & Hahn, 2009).

The probabilistic nature of the Bayesian Information Argumentation Approach can be represented mathematically. For example, a claim (or hypothesis) h is associated with a level of belief (or subjective probability), P . The example that is often used to illustrate this approach is the possibility of it raining outside. Without looking out the window or having some sort of knowledge about the current state of the weather, one's subjective probability that it is raining outside would likely be at chance, or $P(h) = 0.5$. However, if one were to observe evidence (or e) of water droplets on the window, one would rationally update their prior belief with e and thus developing a revised posterior belief about the rain claim, or $P(h/e)$ (Corner & Hahn, 2009).

Bayes' theorem states that this revised belief is dependent on both prior beliefs and the characteristics of the presented evidence. These encompass both the "hit rate" and "false positive" rates of the evidence supporting the claim that it is raining outside. This is essentially one evaluating the evidence of water droplets accurately supporting the claim that it is raining outside. One would most likely evaluate the evidence by concluding that it is more likely that the presence of water droplets suggests it is raining outside than an alternate explanation (e.g., a sprinkler sprayed the window). Thus, this individual is likely to believe, given the evidence, that it is currently raining outside (Corner & Hahn, 2009).

There have not been any published studies that examine how individuals understand RxP arguments utilizing the Bayesian Informal Argumentation Approach. However, the theorem has become increasingly popular over the past few decades in

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published work (e.g., Kemp & Tenenbaum, 2009; Korb, 2004; Nelson, 2005; Oaksford & Chater, 2007). More specifically, due to its ability to be a quantitative model, there is an established history of Bayes' theorem utilized in psychological research on how people draw novel inferences (Osherson, Smith, Wilkie, Lopez, & Shafir, 1990; Rips, 1989). Thus, Bayes' theorem is appropriate to integrate into the proposed study by assessing for levels of probabilistic belief and its influence on one's evaluation of specific arguments relating to RxP.

Rationale for the Study

The issue of prescriptive authority for qualified psychologists is an important and consequential policy debate that has major ramifications for both the profession of psychology and patients who receive mental health services from psychologists. There are currently five states that have passed RxP legislation and the New Jersey state legislature is currently considering similar legislation. Measuring the support/opposition and interest in RxP using New Jersey-based sources is important to gaining a better understanding of where these aforementioned stakeholders stand regarding RxP. Such a survey has not yet been completed in New Jersey. Furthermore, this study seeks to address inconsistencies and gaps in prior research by providing a more unbiased and expanded approach to measuring the role that information plays in the development of attitudes in addition to systematically investigating how participants understand and utilize this information. Lastly, this study seeks to address prior research gaps by investigating previously unstudied factors that might influence RxP opinions. By gaining a better understanding of the aforementioned goals, psychologists, state legislators, and

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New Jersey residents will benefit by having a more well-informed discourse on this important public health policy.

Research Questions Addressed in the Study

The nature of this dissertation is exploratory in that it seeks to better understand how psychologists and psychology graduate students evaluate arguments in support and opposition of RxP in addition to measuring how different groups compare in terms of their RxP opinions. The following are the research questions that will be explored in this study:

1. What is the current level of support for RxP?
2. What is the level of interest to pursue prescribing training if RxP legislation was passed, and is there a difference between psychologists and graduate students?
3. How knowledgeable does this sample report they are regarding RxP legislation?
4. How will participants analyze RxP-related arguments in terms of believability and utility?
5. Is perceived knowledge of RxP related to support or opposition of RxP?
6. Will exposure to RxP point and counterpoint information influence one's support or opposition of RxP?
7. Are there differences as to how psychologists and psychology graduate students analyze RxP arguments and what informs their opinion?
8. Will there be significant differences between professional status, graduate training program, or theoretical orientation in terms of RxP opinion?

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9. Will unstudied variables of perceived increase in financial compensation and professional esteem be an important variable in terms of support for RxP?
10. Which negative RxP consequences participants rank as most important?
11. Are there significant differences between professional status and one's perceived knowledge of RxP and desire to pursue prescribing training?

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Chapter II**Method****Participants**

Participants for the survey were recruited from numerous academic programs and professional organizations. With regard to psychologists, emails were sent to prospective participants through the following listservs: Graduate School of Applied and Professional Psychology's (Rutgers University) alumni database and the New Jersey Psychological Association (NJPA). Prospective psychology graduate student participants were recruited via email from their respective program director at the following universities: Fairleigh Dickinson University (Ph.D. program in clinical psychology), Kean University (Psy.D. program in combined school and clinical psychology), Rutgers University (Ph.D. and Psy.D. programs in clinical psychology and Psy.D. program in school psychology), Seton Hall University (Psy.D. program in counseling psychology), and William Patterson University (Psy.D. program in clinical psychology). For both psychologist and psychology graduate student sources, emails were sent to all possible recipients, and thus do not constitute a random sample.

The number of participants that completed the survey exceeded the initial goal of 150 psychologists and psychology graduate students. In total, 305 participants started the survey and 271 completed it in its entirety. This resulted in a survey completion rate of 89%. The number of completed surveys include responses from each participant source.

Of the 271 participants, 100 (36.9%) are psychology graduate students and 171 (63.1%) are psychologists. Among the psychology graduate students, 18 (18%) are from clinical Ph.D. programs, 43 (43%) are from Clinical Psy.D. programs, 12 (12%) are from

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a combined clinical/school Psy.D. program, 2 (2%) are from a counseling Ph.D. program, and 24 (24%) are from a school Psy.D. program. With regard to the psychologist participants, 5 (2.9%) work in academic or research positions, 136 (79.5%) work in applied practice or consultation, 25 (14.6%) work at both academic and practice jobs, and 2 (1.2%) work in other positions. Of the two “others,” one specified they worked in forensic psychology while the other was no longer working in the field of psychology. Lastly, including both psychologists and psychology graduate students, reported theoretical orientation is as follows: behavioral (5.5%), cognitive behavioral (42.4%), eclectic/integrative (19.6%), humanistic (2.6%), psychodynamic/psychoanalytic (22.5%), systems (4.4%), and preferred not to say (2.6%).

Survey

Since the research objectives of this study are novel, a unique online survey was developed using the Qualtrics online survey software that contained all data sources used in this study (see Appendix). Participation in the survey was voluntary and anonymous (no identifying information was collected). The survey was programmed to allow participants to complete the online survey from either a personal computer or other mobile devices (e.g., smartphones, tablets). The first page of the survey contained the informed consent form which outlined the purpose of the study, procedures, confidentiality, and relevant contact information. If participants consented to participate, they survey immediately began.

The first pair of questions asked participants to evaluate their knowledge of RxP in terms of New Jersey’s specific RxP bill and RxP bills more generally. Both questions

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offered the following response options of “extremely knowledgeable,” “very knowledgeable,” “moderately knowledgeable,” “mildly knowledgeable,” and “not knowledgeable at all.” The second pair of questions asked participants to rate how much they support or oppose RxP (pre-test measure of RxP opinion) and rate how much they agree with the statement that if RxP were legal where they lived, they would pursue training with the intent to prescribe. For the former, possible responses included “strongly support,” somewhat support,” “no opinion,” “somewhat oppose,” and “strongly oppose.” The latter question’s responses included “strongly agree,” “agree,” “neither agree nor disagree,” “disagree,” and “strongly disagree.”

The following section provided four sets of points and counterpoints that are commonly used to either support or oppose RxP. These eight pieces of information were selected after a literature review of arguments for and against RxP. They represent all major arguments commonly used in RxP-related publications. The instructions for this section directed participants to read each item and rate them on two different scales that are informed by the Bayesian Informal Argumentation Approach: believability and utility (how useful is this argument when formulating your opinion of RxP). However, the “utility” scale only appeared if participants rated that item “believable,” “somewhat believable,” or “neutral,” on the believability scale. The rationale for this novel approach is because if a participant did not “believe” the information that was provided, rating its “utility” would be irrelevant since information evaluated as false would not alter one’s opinion according to Bayes’ Theorem. Each page of this section included only one pair of points and counterpoints. After the participant rated both point and counterpoint, they

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would click the continue button to be displayed the second, third, and finally, fourth pair of information.

After the participant evaluated all the information, they were asked the same question they answered during the beginning of the survey regarding their support or opposition to RxP. This question served as the post-test question regarding the question of whether exposure to information alters one's opinion of RxP.

If the participant indicated in the post-test opinion question that they supported RxP, they were then presented with a list of eight reasons why one might support RxP. These were again formulated from the literature review on arguments for or against RxP. Participants were asked to rank each reason in terms of its degree of importance in shaping their opinion (1 being the most important). If participants indicated in the post-test RxP opinion question that they opposed RxP, a list of six reasons to oppose RxP were presented with the same instructions of ranking them in order of importance in shaping their opinion.

The final series of questions related to participant demographics. Participants were asked to identify themselves either as a graduate student or doctoral level psychologist. If "graduate student" was selected, the participant was then asked to select their graduate program type (clinical Ph.D., clinical Psy.D., combined clinical/school Psy.D., counseling Ph.D., or school Psy.D.) If the participant indicated that they were a doctoral level psychologist, they were then asked to indicate what type of work they primarily do as a psychologist (academic/research, applied practice/consultation, both academic/research and practice/consultation, or other, which included a text box to specify type of work).

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Next, all participants were asked to indicate their primary theoretical orientation (behavioral, cognitive behavioral, eclectic/integrative, humanistic, psychodynamic/psychoanalytic, systems, or prefer not to say). Participants were also asked to indicate whether or not they attended a colloquium at the Graduate School of Applied and Professional Psychology – Rutgers University that featured Dr. Brian Chu and Dr. Robert McGrath debating opposing sides on RxP, against and for, respectively. This question was included in order to determine if a large segment of the participant population had already been exposed to this sort of point and counterpoint information relating to RxP. Finally, all participants were asked if they had any “thoughts or comments” about RxP that they would like to share. This question included a text box that offered participants an unlimited amount of characters to express their thoughts. Select quotes from this question are referenced in the discussion section in order to illustrate key participant opinions.

Procedures

All survey participants were recruited via email solicitation. With regard to the recruitment of psychology graduate students, the respective chairs of each program were contacted to ask for their participation in recruitment by emailing their students with the survey solicitation. Program chairs were either contacted via phone or email and were sent a summary of the survey’s purpose and questions. All program chairs agreed to participate in recruiting participants. The emails that program chairs sent out included the following brief message:

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Dear [University and Program Name] Doctoral Students,

My name is Brendan Graziano and I am a clinical psychology doctoral candidate from Rutgers University. I would greatly appreciate if you are able to participate in my dissertation survey on the topic of prescriptive authority for N.J. psychologists. As future psychologists, your opinions are highly valued on this topic. It will take 5-10 minutes to complete. The survey link is below:

[Survey hyperlink]

Thank you so much for your time as I know that you are all very busy!

Sincerely,

*Brendan J. Graziano, Psy.M.
Clinical Psychology Doctoral Candidate, 4th Year
Graduate School of Applied and Professional Psychology
Rutgers, The State University of New Jersey*

Professional psychologists were recruited via NJPA and the Graduate School of Applied and Professional Psychology – Rutgers University’s alumni listserv. The NJPA staff was contacted via phone and asked if they would agree to participate in recruiting participants for the survey. Similar to graduate student recruitment, a summary of the survey’s purpose and questions were provided to NJPA staff before sending out their email to NJPA containing the aforementioned message. The message was adapted to reflect the audience of professional psychologists (i.e., “As *psychologists*, your opinions are highly valued...).

Graduate students’ and psychologists’ participation in the survey was voluntary and anonymous. There were no incentives (e.g., financial) offered for those who participated. The online survey recorded results starting on December 7, 2015 until February 24, 2016. The survey was closed to participation on March 1, 2016, which marked the end of the recruitment phase of the study. Due to the online-nature of the survey, the raw data is being stored on a password-protected Qualtrics account for which

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the principal investigator only has access. There is no identifying information included in the raw data. Seven years after the final publication of any data resulting from this study, the raw data will be erased from the online Qualtrics account.

Data Analysis

Raw data were downloaded from Qualtrics and uploaded to Statistical Package for the Social Sciences Version 21, which was used to analyze the data. Statistical analyses consisted of the following:

1. Preliminary analyses of 271 surveys completed were conducted using descriptive statistics (frequencies, measures of central tendency, and standard deviation) for each item in order to: A) Detect missing data and evaluate outliers; B) Examine frequency distributions of item responses to confirm appropriate selection of statistical procedures; and C) Provide a description of the sample.

2. Descriptive statistics (frequencies) were conducted on the following survey items: A) Pre-and-post RxP opinion to measure support and opposition both before and after exposure to information; B) How knowledgeable the participant believes they are regarding RxP (both New Jersey specific and generally) to measure one's perceived RxP knowledge; C) Interest in pursuing prescription training if RxP legislation were passed in the state in which they live to measure overall interest in pursuing prescription certification; D) Each of the four sets of point and counterpoint information to measure how participant's evaluated each piece of information; E) Each of the eight potential reasons to support RxP to measure which are the most important motivating factors; F) Each of the six potential reasons to oppose RxP to measure which are the most important

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motivating factors for opposing RxP; and G) Demographic data to better understand the sample that participated in this survey.

3. A paired samples t-test was conducted between the pre- and post-test RxP opinion questions in order to measure if there was a significant difference in terms of participants' support or opposition of RxP before and after exposure to information.

4. A case-by-case analysis was conducted in order to quantify how many participants changed their support/opposition of RxP after exposure to information and by how much. A binomial test was conducted as a follow-up to test for probabilistic significance.

5. One-way analyses of variance (ANOVAs) were conducted with the question regarding one's theoretical orientation as the independent variable and the pre-test RxP opinion question as the dependent variable in order to measure any significant differences in RxP opinion between participants with different theoretical orientations. The Least Significant Difference (LSD) post-hoc procedure was used to discern which means were significantly different.

6. One-way ANOVAs were conducted with professional status (graduate student or psychologist) as the independent variable and the following items as dependent variables: A) Perceived knowledge of RxP (state-specific and generally); B) Pre- and post-test RxP opinion; C) Desire to pursue prescribing training if RxP were legal; and D) Believability and utility questions relating to provided RxP information, and E) Reasons to either support or oppose RxP. These tests were conducted in order to measure any significant differences between how psychology graduate students and psychologists

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answered the aforementioned dependent variable items relating to opinions towards RxP and how they analyzed RxP-related information.

7. A Pearson correlation was conducted between the pre-test RxP opinion question and how knowledgeable participants believed they were about RxP (generally) in order to measure if there is a significant relationship between how much one thinks they know about RxP and their level of support or opposition.

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Chapter III**Results**

As described in Chapter II, the survey used in this study was developed in order to gather data about RxP opinions of psychology graduate students and psychologists and how they analyze information relating to RxP. Of the 305 participants that started the survey, 271 completed the survey in its entirety. In this section, Chapter III, the results of the statistical tests referenced in Chapter II are presented.

Research Question #1**What is the current level of support for RxP?**

Participants were asked to what degree they support or oppose RxP twice during the survey: before and after exposure to RxP information. Descriptive statistics were conducted on these questions relating to participants' opinions about RxP. When asked whether participants supported or opposed RxP (prior to exposure to information), results yielded the following data: 17.7% "strongly support," 30.6% "somewhat support," 6.6% "no opinion," 28.4% "somewhat oppose," and 16.6% "strongly oppose." If the two different degrees of support and opposition were collapsed into two general support or oppose categories, 48.3% of participants supported RxP while 45.0% opposed RxP to varying degrees. After participants were exposed to information related to RxP and were asked the same RxP opinion question, the results were as follows: 21.0% "strongly support," 28.8% "somewhat support," 7.4% "no opinion," 23.6% "somewhat oppose,"

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and 19.2% “strongly oppose.” After exposure to information, 49.8% of participants supported RxP while 42.8% opposed RxP to varying degrees.

Table 1: Pre- and Post-Test of RxP Support and Opposition

Question	Strongly Support	Somewhat Support	No Opinion	Somewhat Oppose	Strongly Oppose
Pre-Test	17.7%	30.6%	6.6%	28.4%	16.6%
Post-Test	21.0%	28.8%	7.4%	23.6%	19.2%

Research Question #2

What is the level of interest to pursue prescribing training if RxP legislation was passed and is there a significant difference between psychologists and graduate students?

Regarding participants’ agreement with the statement that they would pursue the training and certification to prescribe if RxP was legal where they lived, 18.5% “strongly agreed,” 17.3% “agreed,” 14.8% “neither agreed or disagreed,” 21.4% “disagreed,” and 28.0% “strongly disagreed.”

Table 2: Desire to Pursue Training and RxP Certification

Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
18.5%	17.3%	14.8%	21.4%	28.0%

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An independent samples t-test was conducted in order to answer the question if graduate students were more likely to endorse an interest in pursuing RxP training than psychologists. There was a significant difference between the interest to pursue RxP training between graduate students ($M=2.68$, $SD = 1.35$) and psychologists ($M = 3.56$, $SD = 1.47$); $t = -4.89$, $p < .001$).

Table 3: Graduate Students' and Psychologists' Interest to Pursue RxP Training

	T	Df	p
Student vs. Psychologist RxP Interest	-4.89	269	.000

Research Question #3

How knowledgeable does this sample report they are regarding RxP legislation?

With regard to participants' self-report of knowledge of New Jersey's RxP legislation, 4.4% were "extremely knowledgeable," 5.2% were "very knowledgeable," 21% were "moderately knowledgeable," 35.4% were "mildly knowledgeable," and 33.9% were "not knowledgeable at all." Regarding participants' self-reported knowledge of RxP more generally, 4.4% were "extremely knowledgeable," 10.3% were "very knowledgeable," 34.3% were "moderately knowledgeable," 42.1% were "mildly knowledgeable," and 8.9% were "not knowledgeable at all."

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Table 4: Knowledge of RxP

Question	Extremely Knowledgeable	Very Knowledgeable	Moderately Knowledgeable	Mildly Knowledgeable	Not Knowledgeable at All
NJ RxP Bill	4.4%	5.2%	21.0%	35.4%	33.9%
RxP Generally	4.4%	10.3%	34.3%	42.1%	8.9%

Research Question #4**How will participants analyze RxP-related arguments in terms of believability and utility?**

Participants were asked to read and evaluate four pairs of point and counterpoint RxP arguments on two scales: believability and utility. The first argument included the following:

There is a shortage of psychiatrists in the state of New Jersey and a decreasing amount of medical students are choosing psychiatry as a specialty (Rai, 2003). Prescriptive authority for psychologists would expand access to prescribing mental health professionals, especially for residents who live in more rural areas (Norfleet, 2002).

In terms of believability, forty-five percent of participants rated this as “believable,” 38.4% “somewhat believable,” 5.5% “neutral,” 7.7% “somewhat unbelievable,” and 3.3% as unbelievable. Of those who rated this argument as “believable,” “somewhat believable,” or “neutral,” 32.8% rated the information as “helpful,” 38.2% “somewhat

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helpful,” 14.3% “neutral,” 5.8% “somewhat unhelpful,” and 8.7% “unhelpful” in terms of formulating their opinion on RxP.

Table 5: First Point Believability Ratings (Re. "There is a Shortage of Psychiatrists")

	Believability
Believable	45.0%
Somewhat Believable	38.4%
Neutral	5.5%
Somewhat Unbelievable	7.7%
Unbelievable	3.3%

Table 6: First Point Utility Ratings (Re. “There is a Shortage of Psychiatrists”)

	Utility
Helpful	32.8%
Somewhat helpful	38.2%
Neutral	14.3%
Somewhat Unhelpful	5.8%
Unhelpful	8.7%

The counterpoint to the first argument was:

Allowing psychologists to prescribe will not increase New Jersey residents’ access to prescribing mental health professionals. Psychologists and psychiatrists

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tend to practice in the same regions of New Jersey and thus would not impact residents' access to care (see map) (Baird, 2007).

The results for believability are as follows: 22.1% “believable,” 29.2% “somewhat believable,” 16.5% “neutral,” 22.1% “somewhat unbelievable,” and 10.1% “unbelievable.” Results for utility were: 18.8% “helpful,” 34.8% “somewhat helpful,” 28.2% “neutral,” 11.6% “somewhat unhelpful,” and 6.6% “unhelpful.”

Table 7: First Counterpoint Believability Ratings ("There is a Shortage of Psychiatrists")

	Believability
Believable	22.1%
Somewhat Believable	29.2%
Neutral	16.5%
Somewhat Unbelievable	22.1%
Unbelievable	10.1%

Table 8: First Counterpoint Utility Ratings ("There is a Shortage of Psychiatrists")

	Utility
Helpful	18.8%
Somewhat helpful	34.8%
Neutral	28.2%
Somewhat Unhelpful	11.6%
Unhelpful	6.6%

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The second point included the following information:

Prescriptive authority is a natural extension of psychologists' scope of practice. Psychologists are experts in diagnosis, assessment, and psychotherapy treatment for mental illnesses. Prescribing psychotropic medications is another method of treatment that psychologists can be trained to administer. By granting psychologists prescriptive authority, a "one-stop-shop" will be created for consumers, creating a more efficient treatment approach for patients rather than having to consult with two separate professionals (Lavoie & Barone, 2006).

Participants' ratings yielded the following results in terms of believability: 35.8% "believable," 28.4% "somewhat believable," 5.2% "neutral," 21.0% "somewhat unbelievable," and 9.6% "unbelievable." Utility data resulted in the following: 44.8% "helpful," 34.4% "somewhat helpful," 15.3% "neutral," 2.7% "somewhat unhelpful," and 2.7% "unhelpful."

Table 9: Second Point Believability Ratings ("RxP is a Natural Extension of Scope of Practice")

	Believability
Believable	35.8%
Somewhat Believable	28.4%
Neutral	5.2%
Somewhat Unbelievable	21.0%
Unbelievable	9.6%

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Table 10: Second Point Utility Ratings ("RxP is a Natural Extension of Scope of Practice")

	Utility
Helpful	44.8%
Somewhat helpful	34.4%
Neutral	15.3%
Somewhat Unhelpful	2.7%
Unhelpful	2.7%

The counterpoint to this argument provided the following information:

Prescriptive authority is not a natural extension of psychologists' scope of practice. Psychiatrists and other prescribing professionals are highly-trained medical professionals while psychologists are experts in assessment and psychosocial interventions. Collaboration between physicians and psychologists is less problematic and already safe and effective in comparison to granting psychologists prescriptive authority (Robiner, Tumlin, & Tompkins, 2013).

Believability data yielded the following results: 28.1% "believable," 33.0% "somewhat believable," 10.0% "neutral," 17.4% "somewhat unbelievable," and 11.5%

"unbelievable." The following are results yielded from the utility data: 32.4% "helpful," 44.1% "somewhat helpful," 17.0% "neutral," 5.3% "somewhat unhelpful," and 1.1% "unhelpful."

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Table 11: Second Counterpoint Believability Ratings ("RxP is a Natural Extension of Scope of Practice")

	Believability
Believable	28.1%
Somewhat Believable	33.0%
Neutral	10.0%
Somewhat Unbelievable	17.4%
Unbelievable	11.5%

Table 12: Second Counterpoint Utility Ratings ("RxP is a Natural Extension of Scope of Practice")

	Utility
Helpful	32.4%
Somewhat helpful	44.1%
Neutral	17.0%
Somewhat Unhelpful	5.3%
Unhelpful	1.1%

The third point included the following information:

Psychologists have been safely prescribing for 20 years in the military and for 13 years in the private sector. It is estimated that psychologists have already written hundreds of thousands of prescriptions to date, yet no serious adverse events,

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malpractice complaints, or lawsuits have resulted from a military or civilian psychologist prescribing medication (McGrath, 2010).

Believability data yielded the following results: 38.9% “believable,” 29.6% “believable,” 11.1% “neutral,” 15.6% “somewhat unbelievable,” and 4.8% “unbelievable.” The following are results yielded from the utility data: 42.0% “helpful,” 21.2% “somewhat helpful,” 25.9% “neutral,” 4.7% “somewhat unhelpful,” and 6.1% “unhelpful.”

Table 13: Third Point Believability Ratings ("Psychologists Have Been Prescribing Safely")

	Believability
Believable	38.9%
Somewhat Believable	29.6%
Neutral	11.1%
Somewhat Unbelievable	15.6%
Unbelievable	4.8%

Table 14: Third Point Utility Ratings ("Psychologists Have Been Prescribing Safely")

	Utility
Helpful	42.0%
Somewhat helpful	21.2%
Neutral	25.9%
Somewhat Unhelpful	4.7%
Unhelpful	6.1%

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The third counterpoint included the following information:

There are no formal data to support the claim that psychologists have been prescribing safely as either military or civilian psychologists. The absence of private sector complaints filed with the FDA's Adverse Events Reporting System (AERS) does not systematically prove that psychologists have been prescribing safely or effectively. AERS requires prescribers to report themselves and given the partisan nature of prescriptive authority, it is highly unlikely that a prescribing psychologist would report an adverse event themselves. With regard to psychologists prescribing in the military, the military does not reveal complaints and patients cannot sue the government (Psychologists Opposed to Prescription Privileges for Psychologists, 2007).

Believability data yielded the following results: 27.0% "believable," 40.4% "somewhat believable," 16.7% "neutral," 10.0% "somewhat unbelievable," and 5.9% "unbelievable." Utility data is as follows: 23.5% "helpful," 29.2% "somewhat helpful," 33.2% "neutral," 10.6% "somewhat unhelpful," and 3.5% "unhelpful."

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Table 15: Third Counterpoint Believability Ratings ("Psychologists Have Been Prescribing Safely")

	Believability
Believable	27.0%
Somewhat Believable	40.4%
Neutral	16.7%
Somewhat Unbelievable or	10.0%
Unbelievable	5.9%

Table 16: Third Counterpoint Utility Ratings ("Psychologists Have Been Prescribing Safely")

	Utility
Helpful	23.5%
Somewhat helpful	29.2%
Neutral	33.2%
Somewhat Unhelpful	10.6%

The fourth and final point included the following information:

Granting psychologists prescriptive authority will eventually pressure psychology doctoral and post-doctoral programs to make detrimental curriculum changes in order to accommodate requisite courses to be certified to prescribe upon conferral of the degree. Curriculum would need to be adjusted to include more courses on physiology, psychopharmacology, and biology. This would either

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cause doctoral programs' completion times to increase or cause courses focusing on psychosocial interventions and theory to be removed. Both would have negative implications for students and the professional health of the field of applied psychology (Lavoie & Barone, 2006).

Believability data yielded the following results: 38.4% “believable,” 27.7% “somewhat believable,” 8.9% “neutral,” 17.3% “somewhat unbelievable,” and 7.7% “unbelievable.”

Utility data yielded the following results: 43.6% “helpful,” 34.7% “somewhat helpful,” 16.3% “neutral,” 4.0% “somewhat unhelpful,” and 1.5% “unhelpful.”

Table 17: Fourth Point Believability Ratings ("RxP Will Pressure Detrimental Curriculum Changes")

	Believability
Believable	38.4%
Somewhat Believable	27.7%
Neutral	8.9%
Somewhat Unbelievable	17.3%
Unbelievable	7.7%

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Table 18: Fourth Point Utility Ratings ("RxP Will Pressure Detrimental Curriculum Changes")

	Utility
Helpful	43.6%
Somewhat helpful	34.7%
Neutral	16.3%
Somewhat Unhelpful	4.0%
Unhelpful	1.5%

Lastly, the fourth and final counterpoint in the survey contained the following information:

Granting psychologists prescriptive authority would not cause detrimental changes to psychology doctoral program curricula. Psychologists have been prescribing for 20 years and these predicted curriculum changes have not occurred. Furthermore, the three states that have legalized prescriptive authority for psychologists have specified that prescriptive certification must occur post-licensure. Newly created and existing post-doctoral programs that decide to orient their program toward training prescribing psychologists will only further the integration between psychotherapy and pharmacotherapy which will be beneficial to patients (DeLeon, Fox, & Graham, 1991).

Believability data yielded the following results: 32.1% “believable,” 26.6% “somewhat believable,” 12.5% “neutral,” 19.2% “somewhat unbelievable,” and 9.6% “unbelievable.”

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Utility data yielded the following results: 37.5% “helpful,” 34.4% “somewhat helpful,” 21.4% “neutral,” 5.2% “somewhat unhelpful,” and 1.6% “unhelpful.”

Table 19: Fourth Counterpoint Believability Ratings ("RxP Will Pressure Detrimental Curriculum Changes")

	Believability
Believable	32.1%
Somewhat Believable	26.6%
Neutral	12.5%
Somewhat Unbelievable	19.2%
Unbelievable	9.6%

Table 20: Fourth Counterpoint Utility Ratings ("RxP Will Pressure Detrimental Curriculum Changes")

	Utility
Helpful	37.5%
Somewhat helpful	34.4%
Neutral	21.4%
Somewhat Unhelpful	5.2%
Unhelpful	1.6%

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Research Question #5**Is perceived knowledge of RxP related to support or opposition of RxP**

A Pearson correlation was conducted to assess the relationship between self-reported knowledge of RxP (generally) and support/opposition of RxP. Results indicated a positive correlation between these two variables such that as self-reported knowledge of RxP increases, so does support for RxP [$r = .156$, $n = 271$, $p = .01$].

Table 21: Self-Reported Knowledge of RxP and Support/Opposition of RxP

Measure	1	2
Self-Reported RxP Knowledge	-	.156
Support/Opposition of RxP	.156	-

Research Question #6**Will exposure to RxP point and counterpoint information influence one's support or opposition of RxP?**

A paired sampled t-test was conducted to compare participants' decision to either support or oppose RxP before and after exposure to information. There was not a significant difference in the scores of RxP opinion prior to exposure to information ($M = 2.96$, $SD = 1.40$) and RxP opinion after exposure to information ($M = 2.91$, $SD = 1.46$); $t = 1.21$, $p = .226$).

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Table 22: RxP Opinion Before and After Exposure to Information

	T	Df	P
Pre vs. Post RxP	1.21	270	.226
Opinion			

Since there was not a significant effect of exposure to information on one's support/opposition of RxP, a case-by-case analysis was conducted for each survey participant in order to further examine how participant's support/opposition to RxP was influenced by exposure to information. From the 271 participants, 59 of them changed their support/opposition of RxP after being exposed to RxP-related information. Twenty-two people of the 59 shifted their opinion towards supporting RxP by 1 interval while 4 participants increased their RxP support by 2 intervals. Twenty-four participants of the 59 increased their opposition of RxP by 1 point while 9 increased their RxP opposition by 2 intervals. From the 59 participants who altered their opinion after exposure to information, 26 moved towards supporting RxP more while 33 participants moved towards opposing RxP more. This difference is non-significant by a binomial test.

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Table 23: Case-By-Case Analysis in Changes in RxP Support/Opposition

Changes in RxP Opinion	Number of Participants
+1 Support	22
+2 Support	4
+1 Oppose	24
+2 Oppose	9

p = .2175, one-tailed test

Research Question #7

Are there differences as to how psychologists and psychology graduate students analyze RxP arguments and what informs their opinion?

A one-way analysis of variance was conducted with professional status (psychologist or psychology graduate student) as the independent variable and believability/utility questions as the dependent variables in order to measure any significant differences in how psychologists and graduate students evaluate information related to RxP. Due to the number of statistical tests computed, the Bonferroni Correction was utilized to compute a new alpha level to control for the chance of statistical error. The Bonferroni Correction computed a new alpha level of .003. Variables that are only significant at the 0.003 alpha level are noted in Table 24. The following variables were significantly different at the alpha level of 0.05:

Counterpoint 1 (Re: "There is a Shortage of Psychiatrists")

- Counterpoint 1 Believability [$F(1,265) = 5.43, p = .021$]: graduate students evaluated this counterpoint as more believable than psychologists; and

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- Counterpoint 1 Utility [$F(1,179) = 9.07, p = .003$]: graduate students evaluated this counterpoint as more useful than psychologists.

Point 3 (Re "Psychologists Have Been Prescribing Safely")

- Point 3 Believability [$F(1,268) = 16.92, p = .000$]: psychologists evaluated this point as more believable than graduate students.

Counterpoint 3 (Re "Psychologists Have Been Prescribing Safely")

- Counterpoint 3 Believability [$F(1,268) = 5.17, p = .024$]: graduate students evaluated this counterpoint as more believable than psychologists; and
- Counterpoint 3 Utility [$F(1,224) = 4.23, p = .041$].

Point 4 (Re "RxP Will Pressure Detrimental Curriculum Changes")

- Point 4 Believability [$F(1,269) = 5.36, p = .021$]. Graduate students also evaluated this counterpoint as more useful than psychologists.

Table 24: Professional Status and Believability/Utility Ratings

Point/Counterpoint Believability or Utility	Source	<i>df</i>	SS	MS	F	<i>p</i>
Point 1 Believability	Between Groups	1	1.02	1.02	.93	.336
	Within Groups	269	295.65	1.10		
	Total	270	296.67			
Point 1 Utility	Between Groups	1	.52	.52	.35	.552
	Within Groups	236	347.20	1.47		
	Total	237	347.72			
Counterpoint 1 Believability	Between Groups	1	9.14	9.14	5.43	.021*
	Within Groups	265	446.06	1.68		
	Total	266	455.20			
Counterpoint 1 Utility	Between Groups	1	10.95	10.95	9.07	.003**

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	Within Groups	179	216.19	1.21		
	Total	180	227.14			
Point 2 Believability	Between Groups	1	2.00	2.00	1.02	.314
	Within Groups	269	527.16	1.96		
	Total	270	529.16			
Point 2 Utility	Between Groups	1	1.03	1.03	1.10	.296
	Within Groups	181	169.38	.94		
	Total	182	170.40			
Counterpoint 2 Believability	Between Groups	1	4.12	4.12	2.23	.136
	Within Groups	268	495.34	1.85		
	Total	269	499.47			
Counterpoint 2 Utility	Between Groups	1	1.34	1.34	1.67	.199
	Within Groups	186	149.61	.80		
	Total	187	150.95			
Point 3 Believability	Between Groups	1	24.43	24.43	16.92	.000**
	Within Groups	268	387.03	1.44		
	Total	269	411.47			.
Point 3 Utility	Between Groups	1	.19	.19	.14	.713
	Within Groups	210	297.86	1.42		
	Total	211	298.05			
Counterpoint 3 Believability	Between Groups	1	6.61	6.61	5.17	.024*
	Within Groups	268	343.10	1.28		
	Total	269	349.72			
Counterpoint 3 Utility	Between Groups	1	4.76	4.76	4.23	.041*
	Within Groups	224	252.15	1.13		
	Total	225	256.90			
Point 4 Believability	Between Groups	1	9.45	9.45	5.36	.021*
	Within Groups	269	473.68	1.76		

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	Total	270	483.12			
Point 4 Utility	Between Groups	1	2.48	2.48	2.87	.092
	Within Groups	200	173.06	.87		
	Total	201	175.55			
Counterpoint 4 Believability	Between Groups	1	4.26	4.26	2.31	.130
	Within Groups	269	497.33	1.85		
	Total	270	501.59			
Counterpoint 4 Utility	Between Groups	1	.12	.12	.13	.721
	Within Groups	190	179.86	.95		
	Total	191	179.98			

* = significant at 0.05 alpha level

** = significant at .003 alpha level

A one-way analysis of variance was also conducted with professional status at the independent variable and rankings of reasons to either support or oppose RxP as the dependent variables. These analyses were conducted to determine if any significant differences exist between how graduate students and psychologists prioritize various reasons to support or oppose RxP. Due to the number of statistical tests computed, the Bonferroni Correction was again utilized to compute a new alpha level to control for statistical error. The Bonferroni Correction computed a new alpha level of 0.004. Variables that are only significant at the 0.004 alpha level are noted in Table 25. Of the 14 analyses run, the following two variables were significantly different at the 0.05 alpha level.

- Ability to Reduce Overmedication [$F(1,153) = 15.89, p = .000$]: graduate students evaluated this reason to support RxP as more important than psychologists; and

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- Increases the Survivability of Professional Psychology [$F(1,153) = 5.94, p = .016$]:
psychologists evaluated this reason to support RxP as more important than graduate students.

Table 25: Professional Status and Rankings of Supportive/Opposing Reasons

Reason for Supporting/Opposing RxP	Source	<i>Df</i>	SS	MS	F	<i>p</i>
Ability to Reduce Overmedication	Between	1	56.90	56.90	15.89	.000**
	Groups	153	547.85	3.58		
	Within Groups	154	604.75			
	Total					
Better Psychotherapy/Psychopharmacology Integration	Between	1	.57	.57	.20	.660
	Groups	153	445.99	2.92		
	Within Groups	154	446.56			
	Total					
Greater Financial Compensation	Between	1	1.57	1.57	.48	.489
	Groups	153	497.98	3.26		
	Within Groups	154	499.55			
	Total					
Greater Professional Esteem	Between	1	.68	.68	.24	.628
	Groups	153	440.06	2.88		
	Within Groups	154	440.74			
	Total					
Increases the Survivability of Professional Psychology	Between	1	22.36	22.36	5.94	.016*
	Groups	153	575.51	3.76		
	Within Groups	154	597.87			
	Total					

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Improves Quality of Mental Healthcare	Between	1	1.99	1.99	.84	.362
	Groups	153	363.59	2.38		
	Within Groups	154	365.57			
	Total					
Natural Extension of Scope of Practice	Between	1	7.27	7.27	2.58	.111
	Groups	153	431.80	2.82		
	Within Groups	154	439.07			
	Total					
Not Enough Qualified Psychiatrists	Between	1	1.45	1.45	.35	.554
	Groups	153	628.46	4.11		
	Within Groups	154	629.91			
	Total					
Concerns Regarding Safety	Between	1	.61	.61	.24	.624
	Groups	153	338.74	2.53		
	Within Groups	154	339.35			
	Total					
Financial Pressures to Prescribe More and Provide Therapy Less	Between	1	7.88	7.88	3.67	.058
	Groups	153	287.94	2.15		
	Within Groups	154	295.82			
	Total					
Detrimental Curriculum Changes to Psychology Doctoral Programs	Between	1	.26	.26	.12	.726
	Groups	153	277.98	2.07		
	Within Groups	154	278.24			
	Total					
Increased Malpractice Costs	Between	1	6.41	6.41	3.90	.050
	Groups	153	220.15	1.64		
	Within Groups	154	226.56			
	Total					

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Lack of RxP Consensus in the Psychology Community	Between	1	.48	.48	.25	.621
	Groups	153	264.78	1.98		
	Within Groups	154	265.27			
	Total					
Lack of a Societal Need for Psychologists to Prescribe	Between	1	.75	.75	.26	.608
	Groups	153	380.31	2.84		
	Within Groups	154	381.06			
	Total					

* = significant at 0.05 alpha level

** = significant at 0.004 alpha level

Research Question #8

Will there be significant differences between professional status, graduate training program, or theoretical orientation in terms of RxP opinion?

To determine if there was a significant difference between one's professional status and their pre-test RxP opinion, a one-way analysis of variance was conducted between these two variables. The analysis was not significant $F(1,269) = .33, p = .565$.

Table 26: Professional Status and Opinion of RxP

Question	Source	<i>Df</i>	SS	MS	F	<i>p</i>
Pre-Test RxP	Between Groups	1	.66	.66	.33	.565
Opinion	Within Groups	269	530.81	1.97		
	Total	270	531.47			

A one-way analysis of variance was conducted to examine the question if there is a significant difference between one's graduate program type (clinical Ph.D., clinical

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Psy.D., counseling Ph.D., school Psy.D., and combined clinical/school Psy.D.) and their pre-test RxP opinion. The analysis was not significant $F(4,94) = 1.17, p = .333$.

Table 27: Graduate Program Type and Opinion of RxP

Question	Source	<i>Df</i>	SS	MS	F	<i>p</i>
Pre-Test RxP	Between Groups	4	6.84	1.71	1.17	.333
Opinion	Within Groups	94	137.16	1.46		
	Total	98	144.00			

A one-way analysis of variance was conducted with the question regarding one's theoretical orientation as the independent variable and the pre-test RxP opinion question as the dependent variable in order to measure any significant differences in RxP opinion between participants with different theoretical orientations. The analysis was significant $F(6,263) = 2.45, p = .026$. The LSD post-hoc procedure was used to discern which means were significantly different.

Table 28: Theoretical Orientation and Opinion of RxP

Question	Source	<i>Df</i>	SS	MS	F	<i>p</i>
Pre-Test RxP	Between Groups	6	28.87	4.65	2.45	.026
Opinion	Within Groups	263	499.76	1.90		
	Total	269	527.63			

With those who identified as behavioral as their primary theoretical orientation, their level of support or opposition to RxP was significantly different than those who identified as cognitive behavioral ($p < .05$), humanistic ($p < .05$), and systems ($p < .05$).

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In all three instances, those who identified as behavioral supported RxP to a lesser degree than those who identified as cognitive behavioral, humanistic, and systems.

Research Question #9

Will unstudied variables of ‘perceived increase in financial compensation’ and ‘professional esteem’ be an important variable in terms of support for RxP?

Participants who “supported” or endorsed “neither support nor oppose” RxP after exposure to information, were asked the rank order a fixed list of eight possible reasons to support RxP. The following lists all eight reasons in order of highest to lowest percentage of participants endorsing that reason as their first, second, or third reason to support RxP: Better integration between psychotherapy and psychopharmacology (77.4%); Improves the quality of mental healthcare (74.8%); Ability to reduce instances of overmedication (41.3%); Not enough qualified physicians/increases access to care (37.4%); Natural extension of psychologists’ scope of practice (32.3%); Increases the chance that the psychologist profession will survive in the future (16.8%); Greater financial compensation (12.3%); and Greater professional esteem (7.7%).

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Table 29: Reasons to Support RxP Ranking

Reason to Support RxP	Percent Ranked as 1 st , 2 nd , or 3 rd
Better integration between psychotherapy and psychopharmacology	77.4
Improves the quality of mental healthcare	74.8
Not enough qualified physicians/Increases access to care	41.3
Ability to reduce instances of overmedication	37.4
Natural extension of psychologists' scope of practice	32.3
Increases the survivability of professional psychology	16.8
Greater financial compensation	12.3
Greater professional esteem	7.7

Research Question #10**Which negative RxP consequences participants rank as most important?**

Participants who opposed or endorsed “neither support nor oppose” RxP after exposure to information, were asked to rank order a fixed list of six possible reasons to oppose RxP. The following lists all six reasons in order of highest to lowest percentage of participants endorsing that reason as their first, second, or third reasons to oppose RxP: Financial pressures to prescribe more and provide psychotherapy less (79.4%); Concerns regarding safety/Inadequate training model (76.5%); Detrimental curriculum changes psychology doctoral programs (e.g., greater emphasis on pharmacology and less on psychosocial interventions and theory) (55.1%); Increased malpractice insurance costs (34.6%); Lack of a societal need for psychologists to prescribe (30.9%); and lack of a

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consensus in the psychology community whether or not to pursue prescriptive authority (23.5%).

Table 30: Reasons to Oppose RxP Ranking

Reason to Oppose RxP	Percent Ranked as 1 st , 2 nd , or 3 rd
Financial pressures to prescribe more and provide therapy less	79.4
Concerns regarding safety	76.5
Detrimental curriculum changes to psychology doctoral programs	55.1
Increased malpractice costs	34.6
Lack of a societal need for RxP	30.9
Lack of consensus in the psychology community regarding RxP	23.5

Research Question #11

Are there significant differences between professional status and one's perceived knowledge of RxP and desire to pursue prescribing training?

An analysis of variance was also conducted with professional status as the independent variable and the following items as dependent variables: A) Perceived knowledge of RxP (state-specific and generally); and B) Desire to pursue prescribing training if RxP were legal. These tests were conducted in order to measure any significant differences between how psychology graduate students and psychologists answered the aforementioned dependent variable items relating to opinions towards RxP.

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There were significant effects of professional status on one's perceived RxP knowledge (state level and generally, respectively) [$F(1,269) = 44.53, p < .0005$; $F(1,269) = 32.31, p < .0005$]. Psychologists reported having greater knowledge of RxP (state level and generally) than graduate students. There was a significant effect of professional status on one's desire to pursue prescription rights if RxP was legal where they lived [$F(1,269) = 23.83, p < .0005$]. Graduate students are more likely to pursue RxP certification than psychologists if RxP was legal where they lived.

Table 31: Professional Status and RxP Knowledge and Desire to Pursue Prescriptive Authority

Question	Source	<i>df</i>	SS	MS	F	<i>p</i>
RxP	Between Groups	1	44.02	44.02	44.53	.000
Knowledge	Within Groups	269	265.88	.99		
(State Level)	Total	270	309.90			
RxP	Between Groups	1	25.88	25.88	32.31	.000
Knowledge	Within Groups	269	215.47	.80		
(General)	Total	270	241.35			
Desire to	Between Groups	1	48.37	48.37	23.83	.000
Pursue RxP	Within Groups	269	545.98	2.03		
	Total	270	594.35			

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Chapter IV**Discussion****RxP Opinion, Self-Reported Knowledge, and RxP Interest (Questions 1-3, 5, 11)**

One of the primary goals of the current study was to provide an updated measure of the opinion of psychologists and psychology graduate students, with regard to the controversial topic of RxP. For the purposes of this discussion, RxP opinion measured prior to information exposure will be the referenced statistic, since participant opinion was measured prior to any influence the information might have caused. This statistic provides a less “contaminated” gauge of overall support or opposition to RxP among participants.

The sample used in the current study revealed a deeply divided field of psychologists and psychology graduate students. A plurality of participants, 48.3%, supported RxP legislation to varying degrees (either “strongly support” or “somewhat support”). However, this is only slightly more than the 45.0% of participants who opposed RxP legislation (“strongly oppose” or “somewhat oppose”). When participants were separated by professional status, 50.9% of psychologists supported RxP and 43.9% opposed it, while 44.0% of students supported RxP with 47.0% opposed it. However, there was not a significant difference between graduate students and psychologists with regard to RxP opinion.

The level of RxP support measured in the current study is notably lower than what was reported in prior studies. The most recent survey research conducted on psychologists’ RxP opinion (Baird, 2007), found that 61.2% of Illinois psychologists

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supported RxP. This is in comparison to the psychologist support level of 50.9% in the current sample. Two prior studies examining graduate students' opinions of RxP (Tatman, et al., 1997; Luscher et al., 2002) found that 70% and 55.1%, respectively, supported RxP as compared to 44.0% of graduate students in the current sample.

This observed decrease in RxP support among both graduate students and psychologists might be a result of several factors. First, it is not unusual for a change in opinion to occur within the field considering the prior referenced studies occurred between the years of 1997 and 2007. At almost a decade after the most recent survey research was conducted, it might be expected that there is a shift in opinion over this span of time. Another possible contributing factor in the apparent decrease in RxP support might be a result of a recent increase in research indicating that psychotherapy is as efficacious in treating a variety of mental illnesses as psychiatric medication (Cuijipers, Sijbrandij, Koole, Andersson, Beekman, & Ill, 2013). This type of research might be shifting how psychologists and graduate students view the importance, or non-importance, of psychiatric medications, and thus tapering their interest in prescribing.

Another possible factor that might have contributed to a decrease in RxP support is a result of recent reports on the issue of over-prescribing psychiatric medication in the United States within the past decade (Sederer, 2015). This sentiment might have decreased this sample's motivation to support RxP if they believe that prescribing psychiatric medications already happens too frequently. However, proponents of RxP would argue that prescriptive authority allows psychologists to address the issue of over-prescribing by discontinuing patients' medication in their care. Lastly, the current finding of decreased RxP might also be a result of a sampling bias since the current study did not

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utilize a random sampling method. It is possible that those who are against RxP were more motivated to participate in the current survey. This limitation should be considered when making any interpretations from the data.

With regard to survey participants' interest in pursuing RxP training if it were legal where they lived, 35.8% of participants expressed interest (either "strongly agree" or "agree") while 49.4% did not express an interest (either "strongly disagree" or "disagree"). A sizable proportion (14.8%) of participants neither expressed interest or disinterest in pursuing RxP training, suggesting that there were ambivalent feelings with some regarding their opinion of pursuing prescriptive authority. However, this finding is consistent with prior research that found a similar disconnect between those who support RxP and the lesser amount of people who actually desire to gain prescriptive authority. For example, only half of the psychologists who supported RxP in the Baird (2007) study also planned to receive the necessary training to prescribe in Illinois.

With regard to graduate students, 42.5% personally desired the authority to prescribe one day while 55.1% supported RxP legislation in the Luscher et al., (2002) survey. These findings suggest that a proportion of those who support RxP do so for other reasons than wanting to prescribe themselves, or simply do not want to interfere with the professional goals of other psychologists. This sentiment was illustrated by one participant's comment of, "Currently I feel that I would not stop any prescription privileges for psychologists, but I would not pursue the required training myself." One practical implication of this finding is that it might be difficult for state-based psychologist organizations to rally support behind RxP legislation if there is not a broad interest in actually pursuing RxP training once it is passed.

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Another important finding related to interest in pursuing RxP training, is that graduate students in this sample were significantly more likely to endorse an interest in obtaining prescriptive authority than professional psychologists. This appears to corroborate prior research when comparing the gap between RxP support and interest to prescribe between psychologists in the Baird (2007) study and the gap among graduate students in the Luscher et al. (2002) study. This finding is likely influenced by both the relatively younger age of graduate students and the infancy of their professional careers as psychologists. Both factors likely make receiving a few additional years of RxP training worthwhile since they will be able to utilize this new skill for a longer period of time when compared to already established psychologists who are further along in their professional careers.

With regard to participants' self-reported knowledge of RxP, this sample was relatively more knowledgeable regarding general RxP legislation, as opposed to the specific RxP legislation pending in the New Jersey state legislature. Only 4.4% of participants believed they were "extremely knowledgeable" regarding either the RxP generally or the New Jersey RxP bill. However, 44.6% of participants believed they were either "very knowledgeable" or "moderately knowledgeable" regarding RxP generally as compared to only 26.2% who said the same about the New Jersey RxP bill.

Considering that majorities (69.3%; 51.0%) of participants reported that they were "not knowledgeable at all" or only "mildly knowledgeable" regarding either the New Jersey RxP bill or RxP generally, respectively, suggests that there is a general lack of education provided to psychology graduate students and psychologists regarding this important issue within the professional field. However, results from this study suggest

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that psychologists reported that they were significantly more knowledgeable about RxP (generally and state-specific) than graduate students. This would suggest that psychologists are following the RxP issue more closely than graduate students, and thus learning more about the specific issues.

One important consideration when interpreting the aforementioned findings, is that 11% of participants reported attending a Rutgers University-based colloquium focusing on the topic of RxP, which occurred several months prior to participants were surveyed. Thus, this RxP seminar might have caused participants from this study to report being better informed. Nonetheless, implications of this finding could be a renewed effort on behalf of psychology doctoral programs and professional state-based psychology organizations to provide greater exposure to this important issue considering the general lack of RxP knowledge this sample exhibited.

A new finding that was illustrated within this sample was the positive correlation between self-reported RxP knowledge and RxP support. As self-reported knowledge of RxP increased, so did one's support for RxP. Although this might suggest that the more one knows about RxP, the more likely they would be to support it, this was not replicated in the portion of this study that measured changes in RxP before and after exposure to RxP information. Instead, there might be other factors that account for this finding. One possible explanation is that those who support RxP are more likely to actively follow RxP-related news since they are interested in RxP succeeding. Those who oppose RxP might be less interested in the RxP issue and thus follow the issue less closely. Future research might consider investigating if there a significant difference in how closely one follows RxP-related news and whether one supports or opposes RxP.

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Bayesian Analysis of RxP Information (Question 4)

A Bayesian approach was utilized for the current study in order to conduct an in-depth analysis as to how participants' evaluated arguments in support and opposition of RxP. Asking participants to quantify each piece of information on scales relating to believability and utility provided data relating to the participant's probabilistic determination of the information's truthfulness, and if evaluated to be true (or neutral), how helpful the information was in helping to inform the participant's opinion. This provided an overview of how the sample in the current study evaluated the most commonly used arguments to either support or oppose RxP.

An important and unexpected observation from the data indicate that participants on average, evaluated every point and counterpoint as believable and useful to varying degrees. No point or counterpoint argument average ever reached the 50%+ mark of being generally unbelievable or unhelpful. Considering that the sample of this study was closely divided between supporting and opposing RxP, it is unusual that all the supportive and opposing arguments were evaluated on average as believable and helpful. Furthermore, this finding appears contradictory since it suggests that, for example, some of those who opposed RxP evaluated arguments in favor of RxP as both believable and useful.

One possible explanation for this finding is that this sample might be particularly receptive to arguments opposite their own opinion, and relatively tolerant of having ambivalent feelings toward RxP. In fact, these data underscore the other findings from the current study that indicated widespread ambivalence toward RxP (e.g., pluralities both supporting RxP legislation and also not interested in personally prescribing in their

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own practice). Although integrating the Bayesian approach did not elucidate any significant divisions in how participants evaluated competing arguments, it did provide additional indications of the sample's ambivalence toward the issue of RxP. The information gathered from the Bayesian approach also provided evidence that although the sample is relatively evenly divided on RxP, the issue does not appear to be deeply ideological or partisan. If this were the case, it would be likely that more participants evaluating arguments that oppose their own opinion would rate them as unbelievable or unhelpful.

Since the authors were unable to find an example of other researchers applying the Bayesian Informal Argumentation approach to mental health policy issues, these findings might suggest that this specific approach might not be the most effective or sensitive theoretical tool when analyzing how people evaluate information relating to mental health policies. This might help to explain the aforementioned unexpected result of each point and counterpoint consistently having a higher percentage of participants rating them as generally believable and helpful than unbelievable or unhelpful, despite a plurality of participants supporting RxP.

One possible limitation of the Bayesian Informal Argumentation Approach is that it assumes that people evaluate evidence solely based on its probabilistic nature. This theory might be too simplistic to be effectively utilized in the field of mental health policy, in that it does not account for the complexities of human ambivalence, cognitive dissonances, and individual politics. For future research applying the Bayesian approach to policy issues, it is recommended that the questioning incorporate a qualitative

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component in order to gather more nuanced data that might not be captured using the strictly probabilistic theory of the Bayesian approach.

Effect of Exposure to RxP Information (Question 6)

This survey addressed if exposure to RxP information would influence opinion. It was hypothesized that exposure to information would influence RxP opinion, considering prior research that has found a widespread lack of knowledge regarding RxP within the field of psychology (Lucas et al., 2013). However, there was not a significant difference in participants' RxP opinion before and after exposure to information. In fact, there was a remarkable absence of changed opinions after exposure to information. Out of 271 participants, only 59 (21.9%) altered their RxP opinion after reading the four sets of point and counterpoint information.

Among those who did alter their opinion, a majority (78.0%) made only a minor adjustment in their opinion (altering their opinion by one increment on the 1-5 scale). The remaining 22% made an adjustment of two increments. These data underscore the finding that exposure to information with this relatively unknowledgeable sample did little to alter their opinion, and in instances when opinions were altered, it was done so in minor ways.

This finding contradicts Pimental et al.'s (1997) study that found a significant shift in RxP opinion of Illinois Psychological Association conference attendees toward the direction of increased support for RxP. However, the finding of the current study that exposure to RxP information does not influence RxP opinion is an important contribution as it adds to the limited research on this topic within the literature. This is especially

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important since the Pimental et al. (1997) study was possibly misleading since it was likely that most of the RxP information that was presented was supportive of RxP. Thus, it seems logical why there was a significant increase in support for RxP. Since the RxP information of the current study was more balanced, it is likely that the current finding is more valid.

Furthermore, the finding of the current study supports the conclusions of Lucas et al.'s (2013) study examining the effect of exposure of RxP information on a sample of Oregon psychologists. Similar to the current study findings, Lucas et al.'s study found non-significant changes in RxP opinion after exposure to information, and instead found only minor and focused shifts in opinion, particularly relating to opinions about specific RxP issues (e.g., cost of RxP legislative efforts) (2013). The sample in the Lucas et al. (2013) study was also evaluated to be mostly unknowledgeable of RxP. Lucas et al. (2013) recommended that future research expand the amount of information provided to survey participants, which the current study aimed to achieve. Even with more RxP information in the current study, shifts in opinion were minor and non-significant, suggesting that access to more relevant information does not influence one's overall decision to either support or oppose RxP. The implications of this finding suggest that stakeholders on both sides of this debate would be helping their cause only marginally should they employ an outreach effort aimed at educating psychologists and graduate students.

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Different Groups and RxP Opinion (Questions 7-8)

Statistical analyses of how graduate students and psychologists compared in terms of how they evaluated RxP information yielded few significant differences, and even fewer when using the more stringent alpha level using the Bonferroni procedure. Due to the exploratory nature of the study, the following discussion is based off statistical analyses using a 0.05 alpha level, allowing for more potential findings. However, the analyses that are significant at the alpha level using the Bonferroni procedure provide greater certainty that a Type I Error did not occur (see Tables 24 and 25).

Graduate students evaluated the argument of "RxP would not expand access to mental health care since psychologists and psychiatrists tend to practice within the same regions," as both more believable and useful (also significant at the Bonferroni correction alpha level) than psychiatrists. To add context to this finding, the mean believability and utility scores of graduate students (2.45; 2.22) and psychologists (2.83; 2.72) both fall within the believable and useful ranges, respectively, indicating that on average, both graduate students and psychologists evaluated this argument to be somewhat believable and helpful. Additionally, both graduate students (1.94; 2.14) and psychologists (1.81; 2.23) evaluated the argument that RxP *would* expand access to mental health care as generally believable and useful, respectively. This finding might indicate that graduate students are more comfortable holding ambivalent feelings toward the issue of RxP expanding access to care than psychologists. Another possible explanation is that psychologists might be experiencing firsthand the shortage of psychiatrists through their patients and are thus more inclined to believe that RxP would indeed expand access to prescribing professionals.

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Another finding was that psychologists evaluated the argument that "psychologists have been safely prescribing for many years without incident" as more believable than graduate students (also significant at the Bonferroni correction alpha level). Similar to the aforementioned finding, both graduate students and psychologists evaluated this argument to be generally believable (2.57; 1.95, respectively). However, the stronger believability evaluation on behalf of psychologists might be explained by psychologists having a greater sense of confidence in already established psychologists' ability to safely prescribe. Similarly, it appears that graduate students might be more skeptical of psychologists' ability to safely prescribe considering the related finding that graduate students evaluated the argument of "there has been little data to support the idea that psychologists have been able to safely prescribe," as both more believable and useful than psychologists.

Graduate students evaluated the argument of "RxP would lead to detrimental curriculum changes to psychology doctoral programs" as more believable than psychologists. Although both graduate students and psychologists again evaluated this argument as generally believable (2.04; 2.43, respectively), graduate students did so to a greater degree. This is likely a result of graduate students currently experiencing the limited flexibility for elective coursework in doctoral curricula. It seems reasonable that a heightened awareness of this issue caused graduate students to be more receptive to this argument than psychologists not currently in graduate programs.

Graduate students and psychologists were also compared with regard to how they ranked reasons to either support or oppose RxP in terms of their perceived importance. These two groups seemed to be relatively similar in this respect since there were only two

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significant differences. The first was graduate students ranking "ability to reduce overmedication" as a more important argument when opposing RxP (also significant at the Bonferroni correction alpha level). One possible explanation to this finding might be that graduate students generally hold a more skeptical view of psychiatric medications than psychologists. Psychologists, having generally practiced for longer in the field than graduate students, might be less skeptical of the importance of medication possibly due to their greater exposure patients who have benefited from medication. There also might be a generational difference among cohorts within the field regarding psychiatric medication.

Lastly, psychologists ranked "[RxP] increases the survivability of the profession," as a more important reason when supporting RxP than graduate students. This finding seems logical within the perspective that practicing psychologists, who have already experienced the financial realities from managed care insurance companies and other financial pressures. Thus, psychologists might be more likely to view RxP as a method to expand the scope of practice for psychologists and improve the survivability of the profession.

Despite there being no statistically significant difference between professional status or graduate program type with RxP opinion, there was a significant difference between reported theoretical orientation and RxP opinion. There was a significant difference between the RxP opinion of those who identified as cognitive behavioral, systems, or humanistic, and those who reported their theoretical orientation as behavioral. To the author's knowledge of the RxP literature, this is a new finding. One possible explanation for this finding is that behaviorists might not be as open to integrating

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different forms of treatment (e.g., psychopharmacology) into the practice of psychology. Behaviorists might tend to adhere more rigidly to only behavioral principles and less likely to see the utility in integrating a different approach. The nature of cognitive behavioral, systemic, and humanistic therapies allow and sometimes encourage treatment integrations. Thus, it seems reasonable as to why these theoretical orientations are more likely to support psychologists integrating additional treatment approaches.

Reasons to Support or Oppose RxP (Questions 9-10)

The current study aimed to investigate possible explanations for findings from prior studies (e.g., Robiner et al., 2002; Brentar & McNamara, 1991) that found a greater percentage of psychologists supporting RxP than the percentage of psychologists interested in pursuing prescriptive authority. Brentar & McNamara (1991) suggested that there might be additional reasons for psychologists supporting RxP besides self-interest in prescribing. Two hypothetical factors Brentar and McNamara suggested were perceived increases in financial compensation and greater professional esteem. These two factors were included in the current study, in addition to six other common reasons to support RxP, and six common reasons to oppose RxP.

The data were represented by calculating the percentage of participants who ranked each reason as ranks first, second, or third, to measure their relative degree of importance. With regard to the previously unstudied variables of increased financial compensation and greater professional esteem, they were ranked in the bottom two spots (12.3%, 7.7%), respectively. This might be surprising to some, considering that "scope of practice" political issues are often pursued in order to advance the profession and allow

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for that profession to perform services usually done by different professionals. One possible explanation for this finding is due to a social desirability bias. In fact, the ranked reasons to support RxP appear to go in order of factors least likely to be impacted by a social desirability bias (better integration between psychotherapy and psychopharmacology; improves quality of mental health care; increases access to care [top 3]) to most likely to be impacted by a social desirability bias (increases the survivability of the profession greater financial compensation, greater professional esteem [bottom 3]). Implications for this finding might be that stakeholders or organizations supporting RxP might focus their organizing efforts to focus on these top three reasons to build support. Future research on this topic might consider including the reason of "desire/interest to prescribe" as a reason to support RxP in order to directly compare this reason with the other reasons used in the current study.

With regard to reasons to oppose RxP, there appears to be less of a social desirability bias in effect. For example, participants ranked "increased malpractice costs" the fourth most important reason out of the possible six. The bottom two, respectively, are a lack of a societal need for RxP and a lack of a consensus within the psychological community regarding RxP. The top three, however, all relate to either protecting the profession or protecting patients. The first and third ranked reasons (financial pressures to prescribe more and provide therapy less; detrimental curriculum changes to psychology doctoral programs, respectively) both relate to a type of "Pandora's box" scenario if RxP were to be realized. Both suggest that RxP would radically change both the practice and educating of psychologists. This opinion was illustrated with a participant's comment of,

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"If psychologists have prescription privileges, we will become psychiatrists.... No doubt this will happen. It will become the only way to justify the money spent on post-doctoral training.... It would take less than 30 years to destroy our profession by making us second class citizens to psychiatrists and allowing social workers to have the distinction of the most qualified of the 'pure' psychologists."

Considering that RxP does seek to alter the profession of some psychologists, these results might be expected. Again, future research might specifically include "disinterest in prescribing" with other reasons in order to directly compare any differences.

Limitations of the Current Study

Despite the notable findings of the current study, there are several limiting factors that should be considered. The first is the relatively poor generalizability of the results. A random sampling procedure was not utilized and since participation was anonymous, there is no way to verify if participating psychologists are practicing in New Jersey. Thus, the results of this survey cannot state that it represents the opinions of only New Jersey psychologists and psychology graduate students. Furthermore, since random sampling was not utilized, this study was potentially vulnerable to a response bias. Thus, it is important to consider these limiting factors when drawing conclusions that might generalize from the sample used in the current study. It is recommended that for future research, a random sampling procedure be used and include a question assessing participant location to address these limitations.

The issue of a False Discovery Rate (FDR) is another statistical limitation, particularly relating to ANOVA analyses that involved many comparisons. FDR refers to

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the increased likelihood of Type I errors due to multiple comparisons. Exploratory studies, such as the current study, are especially susceptible to such errors due to its likelihood of including multiple comparisons (Benjamini and Hochberg, 1995). To correct for this statistical limitation, the Bonferroni correction was utilized to control familywise error. However, future research in this area might consider using a FDR-controlling procedures instead, as outline by Benjamini and Hochberg (1995). Doing so would provide the test with more statistical power, but increase the chances of a Type I error (Benjamini and Hochberg, 1995).

Another limitation involves the options offered to describe one's opinions of RxP. A few participants commented that they wished there was a "conflicted" or "ambivalent" option instead of the "neither support or oppose" option, since they felt that did not accurately reflect their true opinion. The options presented might have skewed participants' true feeling or not captured the nuances. The other limiting factor relating to presented response options was the exclusion of "interest in prescribing" and "not interested in prescribing" as potential reasons to support or oppose RxP, respectively. Considering that this section asking participants to rank order reasons to support or oppose RxP was to assess for reasons *other* than interest/disinterest to prescribe, it would have been helpful to include these options for comparative purposes. For future research in this area, it is recommended that the authors include these aforementioned response options.

Lastly, the environmental factor of a widely attended RxP information forum at Rutgers University is important to consider. The forum, which was held in April 2015, was about eight months prior to participants taking the current survey. Much of the

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information presented at the forum was also included in the information exposure of this survey. A question was included in the current survey that asked participants if they had attended this forum, and about one in ten participants had attended (11%). Although this is not a large proportion of participants, it is still a relative limitation of the study that some of the participants had already been exposed to most of the information contained in the current study.

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Appendix

Q1 Currently, legislation is being considered to grant prescriptive authority to qualified psychologists in New Jersey. How knowledgeable do you feel you are regarding the specific New Jersey legislation?

- Extremely knowledgeable
- Very knowledgeable
- Moderately knowledgeable
- Mildly knowledgeable
- Not knowledgeable at all

Q2 How knowledgeable do you feel you are regarding prescriptive authority generally? (not specific to the legislation proposed in New Jersey)

- Extremely knowledgeable
- Very knowledgeable
- Moderately knowledgeable
- Mildly knowledgeable
- Not knowledgeable at all

Q3 Please rate how much you agree with the following statement: Psychologists should expand their scope of licensed clinical practice to include the administrative and clinical management of psychotropic medications.

- Strongly support
- Somewhat support
- No opinion
- Somewhat oppose
- Strongly oppose

Q4 Please rate how much you agree with the following statement: If prescriptive authority for psychologists were legal where I lived, I would pursue the required training with the intent to prescribe.

- Strongly agree
- Agree
- Neither agree nor disagree
- Disagree
- Strongly disagree

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Q5 You will now be provided with 4 sets of points and counterpoints that are commonly used to either support or oppose prescriptive authority for psychologists. Please read each item carefully and rate each on the following scale: Believability: How believable is this argument to you? You may also be asked to rate each item on the following scale: Utility: How useful is this argument when formulating your opinion of prescriptive authority There is a shortage of psychiatrists in the state of New Jersey and a decreasing amount of medical students are choosing psychiatry as a specialty (Rai, 2003). Prescriptive authority for psychologists would expand access to prescribing mental health professionals, especially for residents who live in more rural areas (Norfleet, 2002). How believable is this argument to you?

- Believable
- Somewhat believable
- Neutral
- Somewhat unbelievable
- Unbelievable

Q6 How useful is this argument to you when formulating your opinion on prescriptive authority?

- Helpful
- Somewhat helpful
- Neutral
- Somewhat unhelpful
- Unhelpful

Q7 Allowing psychologists to prescribe will not increase New Jersey residents' access to prescribing mental health professionals. Psychologists and psychiatrists tend to practice in the same regions of New Jersey and thus would not impact residents' access to care (see map) (Baird, 2007). How believable is this argument to you?

- Believable
- Somewhat believable
- Neutral
- Somewhat unbelievable
- Unbelievable

Q8 How useful is this argument to you when formulating your opinion on prescriptive authority?

- Helpful
- Somewhat helpful
- Neutral
- Somewhat unhelpful
- Unhelpful

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Q9 Prescriptive authority is a natural extension of psychologists' scope of practice. Psychologists are experts in diagnosis, assessment, and psychotherapy treatment for mental illnesses. Prescribing psychotropic medications is another method of treatment that psychologists can be trained to administer. By granting psychologists prescriptive authority, a "one-stop-shop" will be created for consumers, creating a more efficient treatment approach for patients rather than having to consult with two separate professionals (Lavoie & Barone, 2006). How believable is this argument to you?

- Believable
- Somewhat believable
- Neutral
- Somewhat unbelievable
- Unbelievable

Q10 How useful is this argument to you when formulating your opinion on prescriptive authority?

- Helpful
- Somewhat helpful
- Neutral
- Somewhat unhelpful
- Unhelpful

Q11 Prescriptive authority is not a natural extension of psychologists' scope of practice. Psychiatrists and other prescribing professionals are highly-trained medical professionals while psychologists are experts in assessment and psychosocial interventions. Collaboration between physicians and psychologists is less problematic and already safe and effective in comparison to granting psychologists prescriptive authority (Robiner, Tumlin, & Tompkins, 2013). How believable is this argument to you?

- Believable
- Somewhat believable
- Neutral
- Somewhat unbelievable
- Unbelievable

Q12 How useful is this argument to you when formulating your opinion on prescriptive authority?

- Helpful
- Somewhat helpful
- Neutral
- Somewhat unhelpful
- Unhelpful

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Q13 Psychologists have been safely prescribing for 20 years in the military and for 13 years in the private sector. It is estimated that psychologists have already written hundreds of thousands of prescriptions to date, yet no serious adverse events, malpractice complaints, or lawsuits have resulted from a military or civilian psychologist prescribing medication (McGrath, 2010). How believable is this argument to you?

- Believable
- Somewhat believable
- Neutral
- Somewhat unbelievable
- Unbelievable

Q14 How useful is this argument to you when formulating your opinion on prescriptive authority?

- Helpful
- Somewhat helpful
- Neutral
- Somewhat unhelpful
- Unhelpful

Q15 There are no formal data to support the claim that psychologists have been prescribing safely as either military or civilian psychologists. The absence of private sector complaints filed with the FDA's Adverse Events Reporting System (AERS) does not systematically prove that psychologists have been prescribing safely or effectively. AERS requires prescribers to report themselves and given the partisan nature of prescriptive authority, it is highly unlikely that a prescribing psychologist would report an adverse event themselves. With regard to psychologists prescribing in the military, the military does not reveal complaints and patients cannot sue the government (Psychologists Opposed to Prescription Privileges for Psychologists, 2007). How believable is this argument to you?

- Believable
- Somewhat believable
- Neutral
- Somewhat unbelievable
- Unbelievable

Q16 How useful is this argument to you when formulating your opinion on prescriptive authority?

- Helpful
- Somewhat helpful
- Neutral
- Somewhat unhelpful
- Unhelpful

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Q17 Granting psychologists prescriptive authority will eventually pressure psychology doctoral and post-doctoral programs to make detrimental curriculum changes in order to accommodate requisite courses to be certified to prescribe upon conferral of the degree. Curriculum would need to be adjusted to include more courses on physiology, psychopharmacology, and biology. This would either cause doctoral programs' completion times to increase or cause courses focusing on psychosocial interventions and theory to be removed. Both would have negative implications for students and the professional health of the field of applied psychology (Lavoie & Barone, 2006). How believable is this argument to you?

- Believable
- Somewhat believable
- Neutral
- Somewhat unbelievable
- Unbelievable

Q18 How useful is this argument to you when formulating your opinion on prescriptive authority?

- Helpful
- Somewhat helpful
- Neutral
- Somewhat unhelpful
- Unhelpful

Q19 Granting psychologists prescriptive authority would not cause detrimental changes to psychology doctoral program curricula. Psychologists have been prescribing for 20 years and these predicted curriculum changes have not occurred. Furthermore, the three states that have legalized prescriptive authority for psychologists have specified that prescriptive certification must occur post-licensure. Newly created and existing post-doctoral programs that decide to orient their program toward training prescribing psychologists will only further the integration between psychotherapy and pharmacotherapy which will be beneficial to patients (DeLeon, Fox, & Graham, 1991). How believable is this argument to you?

- Believable
- Somewhat believable
- Neutral
- Somewhat unbelievable
- Unbelievable

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Q20 How useful is this argument to you when formulating your opinion on prescriptive authority?

- Helpful
- Somewhat helpful
- Neutral
- Somewhat unhelpful
- Unhelpful

Q21 After having evaluated the aforementioned information, please rate how much you agree with the following statement: Psychologists should expand their scope of clinical practice to include the administrative and clinical management of psychotropic medications.

- Strongly support
- Somewhat support
- No opinion
- Somewhat oppose
- Strongly oppose

Q22 Below is a broad list of potential reasons for supporting prescriptive authority for psychologists. Please rank order them (1 – 8) in terms of its degree of importance in shaping your opinion.

- _____ Ability to reduce instances of over-medication
- _____ Better integration between psychotherapy and psychopharmacology
- _____ Greater financial compensation
- _____ Greater professional esteem
- _____ Increases the chances that the psychologist profession will survive in the future
- _____ Improves the quality of mental healthcare
- _____ Natural extension of psychologists' scope of practice
- _____ Not enough qualified physicians/Increases access to care

Q23 Below is a broad list of potential reasons for opposing prescriptive authority for psychologists. Please rank order them (1 – 6) in terms of its degree of importance in shaping your opinion.

- _____ Concerns regarding safety/Inadequate training model
- _____ Financial pressures to prescribe more and provide psychotherapy less
- _____ Detrimental curriculum changes to psychology doctoral programs (e.g., greater emphasis on pharmacology and less on psychosocial interventions and theory)
- _____ Increased malpractice insurance costs
- _____ Lack of a consensus in the psychology community whether or not to pursue prescriptive authority
- _____ Lack of a societal need for psychologists to prescribe

Q24 Please describe your professional status:

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- Graduate student
- Doctoral level psychologist

Q25 Please select your graduate program type:

- Clinical Ph.D.
- Clinical Psy.D.
- Combined Clinical/School Psy.D.
- Counseling Ph.D.
- School Psy.D.

Q26 Please describe the type of work you do as a psychologist:

- Academic/Research
- Applied practice/consultation
- Both academic/research and practice/consultation
- Other: describe below _____

Q27 Please describe your primary theoretical orientation:

- Behavioral
- Cognitive Behavioral
- Eclectic/Integrative
- Humanistic
- Psychodynamic/Psychoanalytic
- Systems
- I'd prefer not to say

Q28 Did you attend the April 1st, 2015 colloquium at the Graduate School of Applied and Professional Psychology of Rutgers University featuring Drs. Chu and McGrath presenting on prescriptive authority for psychologists?

- Yes
- No

Q29 Finally, do you have any thoughts or comments about prescriptive authority for psychologists that you would like to share?