

**Survey of Dispute Mediator's Intention to Use the
Statistical Methods Convention in Mediation
Process: A Correlational Study**

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Abstract

Study concerns the statistical methods convention as applied in organizational dispute mediation processes. The convention are tools including statistical methodology, digital infrastructure, artificial intelligence, augmented reality, and virtual reality innovations. Focus is on the intention of dispute mediators to use the tools to aid in dispute mediation. Problem was that dispute mediators' use of the statistical methods convention is not widespread and is met with resistance in mediation, even though it has been demonstrated that the convention can increase efficiency, performance, and provide improvement. Stakeholders are organizations, leaders, mediation personnel, and staff members affected by a dispute. Purpose of research was to understand the dispute mediator's perspective, and on predicting their behavioral intentions. Theoretical model was theory of planned behavior, extended by constructs of perceived usefulness, and perceived ease of use, from the technology acceptance model. Methodology was a quantitative approach with an online survey of 305 dispute mediators, 19 questions, and slider scale to select level of agreement. Design was correlational, and data from survey were analyzed with correlational and structural equation modeling techniques using SmartPLS® software. Empirical results showed perceived usefulness of the statistical methods convention had the greater magnitude of causal relation with the intention to use. Dispute mediator's perception of control on using the convention and the intention to use it also had a significant magnitude of causal relation. Outcome of the research suggest organizational leaders' campaign for the use of the statistical methods convention to assist their dispute mediators by emphasizing the utility and usefulness of the package. Also, emphasis should be on the ability and control to use it. Future research should address the influence of social norms as the technology is more widespread. Practitioners should further develop educational materials and improve innovation regarding these new tools.

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Chapter 1: Introduction

Within organizations, leaders often have to orchestrate processes to resolve disputes that arise in various circumstances. Mediation is a change intervention paradigm that is intended to effect resolution to a dispute, consensually by the disputants, with a third-party mediator who acts as a guide, a neutral, impartial, and objective influencer to administer the mediation process protocols (Bathina & Sitamanikyam, 2023; Moore, 2014; National Association of Mediators [NACM], 2021). For purposes of this study, the third-party DM was referred to as a dispute mediator (DM). Dispute resolution is critical for positive organizational functioning. For the organization, mediation is singularly the most advantageous process, because it provides a party-decided dispute resolution procedure; rendering a positive win-win result; and is more likely to be followed by the parties (Bathina & Sitamanikyam, 2023; Moore, 2014). The organization and workplace environment benefit because the results of dispute mediation are purposed to be a proactive change intervention activity in developing workplace staff relationships, strengthening the staff's positive resolve, while advancing the organization's performance productivity goals (Barsky, 2014; Moore, 2014; NACM, 2021). Further, in terms of business administration, mediation is purposed to be a proactive activity in developing partnership relationships and corporate constituent relationships, by helping to resolve partnership and corporate challenges, providing a beneficial outcome for members and performance benefits for the organization.

Organization's transformational leaders use dispute mediation skills as a conciliation technique, to transition disputants to constructive motivational communications, and mutual agreement concerning the value of everyone's ideas, needs, and interests (Adelman-Mullally et al., 2023; Barsky, 2014; Moore, 2014; NACM, 2021). Many theories are implemented in the mediation process. In workplace dispute resolution, the use of concepts, theories, frameworks,

and models are applied in the resolution opening phase, communicating phase, negotiation phase, and closing phase. There are several noteworthy examples: (a) the concept of neutrality and impartiality; (b) Maslow's theory of hierarchy of needs; (c) the concept of self-determination; (d) the forming-storming-norming-performing theory; and (e) transactional theory "I'm Ok, you're Ok" concept (Barsky, 2014; Bathina & Sitamanikyam, 2023; Moore, 2014; NACM, 2021).

In dispute mediation, the Statistical Methods Convention for dispute mediators (SMC-DM) is the foundational mechanism for data-dispute analytics. The statistical methods convention (SMC) is, at foundation, a reactive and also a proactive statistical tool based on descriptive and inferential statistical techniques. The SMC is a label and concept for a scientific method that includes an array of statistical tools, such as statistical algorithms and software, database sources, data analytics, and artificial intelligence; used to explain, determine, or predict a phenomenon; which is available for dispute mediation (Latilo et al., 2024; Wing et al., 2021; Zeleznikow, 2021). SMC uses both historical and/or current data to draw conclusions, make inferences, and communicate information in graphical form with numeric explanations. In dispute mediation, in *reaction* to disputes, SMC is a statistical tool prevalently used by dispute mediators. However, modernly, because of technological innovation, there is a growing potential for proactive steps to be taken to anticipate and *proactively* intervene to reduce the likelihood of disputes occurring (Jang & Nam, 2021; Wing et al., 2021)). SMC-DM anticipatory statistical techniques provide proactive information that may prevent the occurrence of costly disputes.

Statistics is a science that concerns itself with the collection of data, analyzing data, and interpreting data, in an effort to explain, determine, or predict the behavior of an identified population of interest based on a sample. (Warner, 2021). SMC is applied statistics, and SMC-

DM is statistics applied to Dispute Mediation. A background of the *proactive* nature of SMC-DM builds upon its *reactionary* foundation. SMC-DM is initially used as a tool to collect, analyze, and interpret information from conflicting disputants, and that information is accumulated in a database, which can later be analyzed to observe trends, patterns, and relationships (Jang & Nam, 2021; Peters, 2021; Wing et al., 2021). In dispute mediation, the cumulative results of the analysis can be used to make informed decisions and make enlightened resolutions. This proactive change intervention activity will accommodate the dispute mediation process. As a form of SMC-DM, the importance of data analytics is that it involves a 4th party independent, which is the computer online analytical system to process data, with coverage efficiently providing more privacy and safety, information processed faster than a human, less time consuming, and even greater opportunity to access justice (Wing et al., 2021).

There has been much general research on the dispute resolution processes. However, the areas involved with the SMC-DM are relatively new technological innovations. There has been research into how technological innovation can be applied to the proactive dispute resolution process; research has been conducted into the effectiveness of the use of technologies in the dispute resolution process, finding substantial effectiveness; and additionally, the ethical concerns regarding the use of computer-assisted resolution systems in the mediation process have been studied (Balzer & Schneider, 2021; Martinez, 2020; Wing et al., 2021). There are indicators that more research on proactive dispute intervention is needed.

The theory of planned behavior (TPB) is a theoretical perspective, framework, and model that has been used in a variety of domains. Many of the domains concern the help given by a neutral caregiver to help another entity transition from a position of need or ill health, and poor relationships to a position of satisfaction, accomplished health, and improved relationships

(Ajzen, 2020, 2024; Shapiro & Watson, 2000). The TPB has a history of being applied in a variety of disciplines. The TPB has been used in dispute resolution (Lee et al., 2020; Lee et al., 2018). The research on the topic will help provide further insights into how the SMC-DM can be further implemented by DMs to help promote the efficiency of the dispute mediation process, reduce caseloads, and increase access to justice. In terms of theoretical importance, the research on the topic will help establish the use of an extended theoretical model, and apply it to the domain of dispute mediation. In terms of the SMC-DM importance, the research on the topic can help expand the awareness and use of data analytics, artificial intelligence, and online proactive dispute mediation resolution methods.

The SMC-DM focus is on technological innovation, incorporating data analytics, and leveraging artificial intelligence, and is proactive in nature, to enhance the dispute mediation process within and between organizations. This SMC-DM is a fairly new technological innovation that has the increasing potential to bring about vital improvements to the mediation process (Jang & Nam, 2021; Wing et al., 2021; Zeleznikow, 2021; Zhang et al., 2023). Organizational DM leaders could integrate these proactive technological innovations into existing dispute mediation processes.

Statement of the Problem

The problem to be addressed in this study was that dispute mediators' use of the proactive Statistical Methods Convention is not widespread and is met with resistance in the dispute mediation process, even though it has been demonstrated that SMC can increase efficiency and provide improvement. The modern advancement of technological innovation with SMC is providing greater proactive dispute intervention and increased effectiveness (Sternlight, 2020; Wing et al., 2021; Zeleznikow, 2021). It has been shown that *proactive change* and

predictive interventions benefit the DMs' process. This problem is evidenced by the fact that organizations spend over \$350 billion a year in expenses, along with an average of 2.1 hours per week dealing with disputes (Dirrler & Podruzsik, 2022; Pollack Peacebuilding Systems, 2024; Short, 2021), under traditional reactive dispute resolution circumstances. Currently, much of the research addresses *reactive change* interventions, which are responsive in nature and are intended to timely resolve the dispute. The unfavorable impact is becoming more apparent due to the reactionary dispute resolution backlog, leading to overloaded case workers and increased economic costs (Dirrler & Podruzsik, 2022; Wing et al., 2021). Optimally, the dispute mediation process can be improved by the usage of technological innovation. The statistical methods convention for dispute mediators can be combined with the traditional dispute mediation process, and when adopted, data analytics can evolve into a proactive and prevention-oriented dispute administration process (Latilo et al., 2024; National Association of Certified Mediators [NACM], 2021; Vukovic, 2019). Within and between organizations, the foreseeability of disputes is important, and the statistical methods convention for dispute mediators can lessen the unfavorable impact on organizational relationships. Researchers have noted that the statistical methods convention for dispute mediators improves efficiency and reduces costs (Bienstock, 2019; Kay & Skarlicki, 2020; Lee et al., 2020). If this research is not conducted, organizations suffer because the statistical methods convention for dispute mediators can contribute to the dispute mediation proactive pathway.

Purpose of the Study

The purpose of this quantitative correlational design research was to better understand the dispute mediator's perspective and gain information on predicting the behavioral intentions of dispute mediators regarding the use of the statistical methods convention for dispute mediators

by way of the theoretical framework of the TPB extended by technology acceptance model (TAM) constructs. The dispute mediators (DMs) in the US are the target group of interest. The study design was correlational, and data was collected by administering survey questionnaires to the participants. The theories that were engaged to guide the study are the TPB, with constructs of attitude, subjective norms, perceived behavioral control, and behavioral intention, extended with the constructs of perceived usefulness, and perceived ease of use, from the TAM (Ajzen, 2020; Cheng, 2019; Malatji et al., 2020). Perceived usefulness and perceived ease of use appeared to be applicable constructs to this study. According to researchers, perceived usefulness and perceived ease of use have unique measurements and differing influences on a behavioral intention outcome (Lee et al., 2020; Tung, 2019). Additionally, constructs that are functions of the mediator's intentional behavior to use the statistical methods convention for dispute mediators were measured to explore which have a statistically significant impact. The researcher put forth a measurement model and structural model that analyzed the potential correlational relationships. Steps included conducting a breadth and depth literature coverage about the topic, and preparing a survey questionnaire with questions adapted from prior researchers' peer-reviewed work, which were tested for reliability and validity. The researcher used Survey Monkey, an independent 3rd party online platform, to recruit participants, who were not directly accessed by the researcher. A convenience sample was taken from the population of dispute mediators located in the US. Survey Monkey distributed the survey questionnaire (Kimball, 2019). Data analysis was done with correlational and structural equation modelling techniques.

Introduction to Theoretical Framework

The theory of planned behavior (TPB) was the theoretical perspective that guided this research study. Dispute mediation is a behavioral change intervention, which can be evaluated

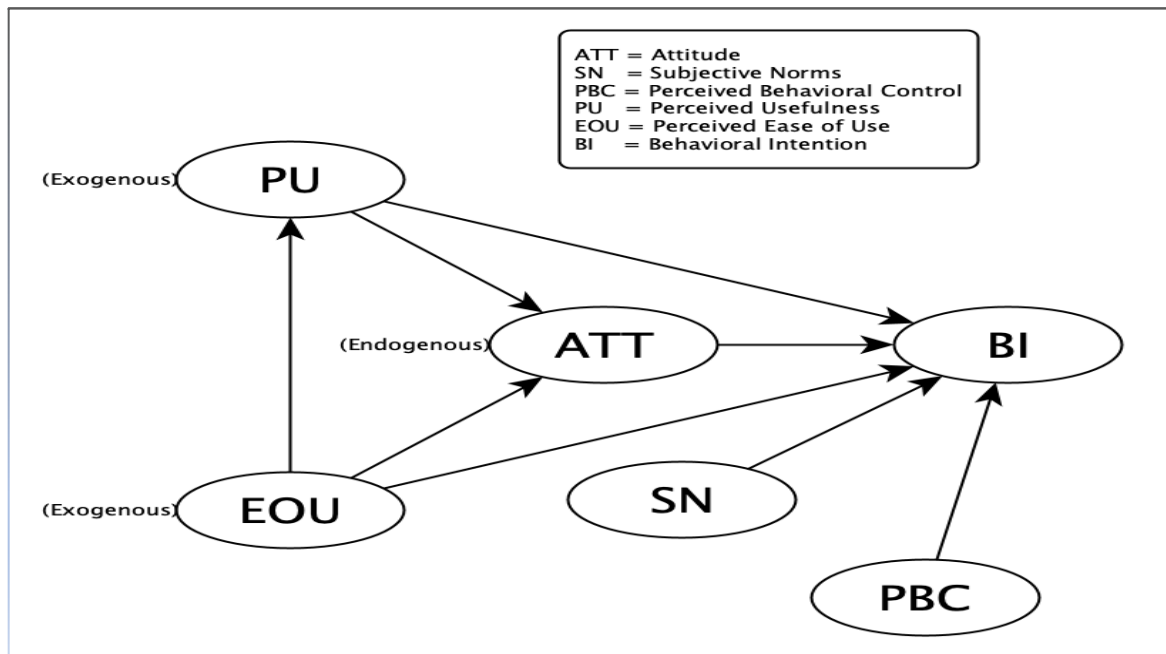
based on the TPB (Steinmetz et al., 2016). The TPB framework explains a phenomenon by expressing the relationships between the explanatory constructs and responsive outcome construct. Ajzen's TPB model includes three explanatory constructs of attitude, subjective norms, and perceived behavioral control; and one responsive outcome construct of behavioral intention (Ajzen, 1991, 2020; Fishbein & Ajzen, 2010). The three explanatory constructs are purposed to explain the variability in the outcome construct. Such variability analysis includes a discussion concerning the additivity function of the explanatory constructs, as well as the proportional variability. Clarity and measurement for the research topic is critical for the analysis. In Figure 1 each path arrow represents a relationship that might have differing measurements, which specific information is needed for the analysis. The structural equation model (SEM) constructs with path arrows were all measured and needed for the analysis.

Researchers have applied the TPB to explain many phenomena in a wide range of disciplines, such as health care, legal administration, business administration, construction, and marketing and sales (Ajzen, 2024; Lee et al., 2020). The TPB, which is an extension of the theory of reasoned action foundational framework, helps to discover what psychological and social influences will cause an individual to develop the intent to actually commit a behavior; for example, was intent and actual behavior formed because there was an acceptable attitude towards a particular phenomenon (Ajzen, 1991, 2020; Fishbein & Ajzen, 2010). Researchers have applied the TPB theory in many disciplines to discover whether attitudes, subjective norms, and/or perceived behavioral control drive an individual to behave in a certain manner. The TAM is also an extension of the theory of reasoned action perspective, and the researcher can use the model to discover whether perceived usefulness, or the perceived ease of use of a phenomenon, is an explanation for an individual's resulting intention to use a particular technology (Cheng,

2019; Lee et al., 2020; Wang et al., 2024). In the current theoretical framework here, two constructs from the TAM, namely perceived usefulness, and perceived ease of use, were added constructs to the TPB framework in this study. Researchers have suggested that the TPB is conducive to extension by the addition of other variables (Ajzen, 2020; Cheng, 2019; Wang, 2023). It appears that this can be helpful in this study. The TPB framework posits that there are positive correlations between the constructs, such that when attitude, subjective norms, and perceived behavioral control increase; the outcome of behavioral intention will also increase (Ajzen, 1991, 2020; Fishbein & Ajzen, 2010). Additionally, in this given study the relationship between attitude and behavioral intention is posited to be statistically intervened by the perceived usefulness construct, and the perceived ease of use construct. Figure 1 provides a graphical representation of the theoretical framework.

Figure 1

Theory of Planned Behavior Framework, Extended by Perceived Usefulness, and Ease of Use



Sources: (Author's Own Work; Ajzen, 1991, 2020; Cheng, 2019; Fishbein & Ajzen, 2010; Wang, 2023).

In this particular study, the framework described illustrated the proposed relationships under study, such that the variables of (a) the DM's attitude towards the SMC-DM, (b) the DM's subjective norms concerning the use of the SMC-DM, and (c) the DM's perceived behavioral control concerning the use of the SMC-DM; have a correlational relationship with the mediator's behavioral intention to use the SMC-DM. Also, the DM's attitude towards the SMC-DM; had an intervening influence on the relationship between the DM's perceived usefulness of the SMC-DM, and the DM's behavioral intention to use the SMC-DM. Additionally, the DM's perceived usefulness of the SMC-DM; had an intervening influence on the relationship between the DM's perceived ease of use of the SMC-DM, and the DM's attitude towards the SMC-DM.

Background factors that underly the TPB in this study, consist of the intervention protocols to transform behavior (Fishbein & Ajzen, 2010; Moore, 2014). Conflict mediation is a dispute resolution paradigm of transformation and a process where a mediator who is neutral and impartial, uses transformational intervention techniques to manage the mediation process. The theoretical framework described above is useful for the research study in that it is directly connected to the problem, purpose, and research questions of the study. The variables and relationships of the framework address the issues raised by the problem, and the framework provided a method to analyze the issues and provide answers to the research questions (Varpio et al., 2020). It appears that the framework can provide a comprehensive guide for the objectives of the research.

Introduction to Research Methodology and Design

The researcher adopted a quantitative approach to the research and used a correlational design. This allowed the researcher to use numerical data to assess relationships among variables. This quantitative approach and design appeared to be well suited to provide analysis of

the research questions and address the research problem because of the quantitative nature and relational qualities of the research variables involved (Trochim et al., 2016; Warner, 2021). The data was collected from research participants by way of a survey instrument. The nature of the data allowed for statistical analysis by way of the Smart PLS structural equation modeling software. The design of this study is to accommodate the research theme of the DM's intention to increase the use of the SMC-DM. The unit of analysis is individual DMs in the US. The research was non-experimental in nature, and the TPB, as extended by two constructs from the TAM, including (a) perceived usefulness, and (b) perceived ease of use. The SEM protocol is frequently used by researchers to analyze the TPB model. SEM is an advanced multivariate statistical technique that will describe analytically the numeric and structural relationships connecting the variables (Hair et al., 2019; Hair et al., 2022). Because of the multiplicity of research variables in this study, SEM appears to be an appropriate statistical technique. Operationalization of constructs allowed for the processing of numerical data.

A survey questionnaire instrument was utilized to collect self-reporting type of data from participating informants to provide raw data, which was categorized and analyzed. The continuous nature of survey data output provided a statistical opportunity to analyze the data for informational relevance, integrity, reliability, and validity, which is required of data that was used to answer the questions posed by the research (Trochim et al., 2016; Warner, 2021). The nature of this data was conducive to answering the research questions and addressing the problem.

The research study concerns the DM's intention to use the SMC-DM. The unit of analysis was individual DMs, and a sample was drawn from the target population of interest, which are mediators located in the United States (US). In terms of eligibility to participate in the

research, participant characteristics were: (a) minimum age 18, (b) all genders are included, and (c) income could be variable. Additionally, sample selection determinants for inclusion in the study are DMs, that may be certified by way of an educational institution; a National Regional, or International Conflict Mediation Association; a Conflict Resolution Association; or by a State or Federal Court system. Also eligible are DMs who are not certified.

The researcher made a preliminary assessment for a minimum sample size needed for the research purposes. The researcher rounded up to a sample size of 250 (Andrade, 2020; Wolf et al., 2013). The sample size of 250 aligns with SEM general rules of thumb and is feasible for the researcher to attain. Information for the assessment included six pre-set estimates made at the beginning of the study. The six pre-set estimates concern the likelihood of making errors and information concerning the likelihood of the researcher's alternative hypothesis being correct. Meaning at the beginning of the research project the researcher sets six (6) risk assessment items consisting of: (a) a pre-set alpha significance level at .05, meaning there is a 5% risk of stating the null hypothesis is false when it is true; (b) a pre-set beta level at .20, meaning there is a 20% risk of stating the null hypothesis is correct when it is false; and (c) a pre-set power probability stating the null hypothesis is false when it is false, and the alternative hypotheses are correct – power (Faul et al., 2007; Field, 2024; Warner, 2021). Further assessment items include a pre-set confidence level of 95%, meaning the probability that your data will fall within a confidence interval of an upper and lower range; the effect size coefficient; and an indication of how many tail test, meaning how broad or narrow an assessment will be made (Faul et al., 2007; Field, 2024; Warner, 2021). After consideration of the six pre-set items of information and the number of predictor variables, the statistical algorithm G*Power was used to compute the minimum sample size appropriate for the model and study. However, developers of the SEM algorithm

have indicated that a “rule of thumb” estimate of minimum sample size should be based on the number of predictor variables times 10 (Hair et al., 2022). Here, the current study set risk estimates are: (a) pre-set alpha at .05; (b) pre-set beta at .20; (c) estimate of power .80; (d) confidence level at 95% that data will fall within confidence interval range; (e) an estimated f^2 effect size of 0.15; and (f) a two-tail test. The risk estimate information was provided to two sample size computation vendors, consisting of Analytics Calculator, and G*Power. The estimated effect size is Cohen’s f^2 , where 0.02 is small, 0.15 is medium, and 0.35 is large; and the medium 0.15 was selected as appropriate for an SEM study (Cohen, 1991; Hair et al., 2022).

Soper Analytics Calculator is an independent vendor algorithm and did provide three estimates. Estimates consist of (a) minimum sample size to detect effect 39, (b) minimum sample size for model structure 100, and (c) recommended minimum sample size 100. The input parameters were: 0.15 effect size, 1 latent variable, estimated 5 observed variables, .05 *p-value*, and .80 statistical power (see Figure 2).

Figure 2

Graphical Representation and Data from Soper Analytics Calculators Software Computation

The screenshot displays the Soper Analytics Calculator interface. It features five input fields with blue text and a blue 'Calculate!' button. Below the button, three results are displayed in blue text: 'Minimum sample size to detect effect: 39', 'Minimum sample size for model structure: 100', and 'Recommended minimum sample size: 100'.

Anticipated effect size:	0.15	?
Desired statistical power level:	0.80	?
Number of latent variables:	1	?
Number of observed variables:	5	?
Probability level:	0.05	?
Calculate!		
Minimum sample size to detect effect: 39		
Minimum sample size for model structure: 100		
Recommended minimum sample size: 100		

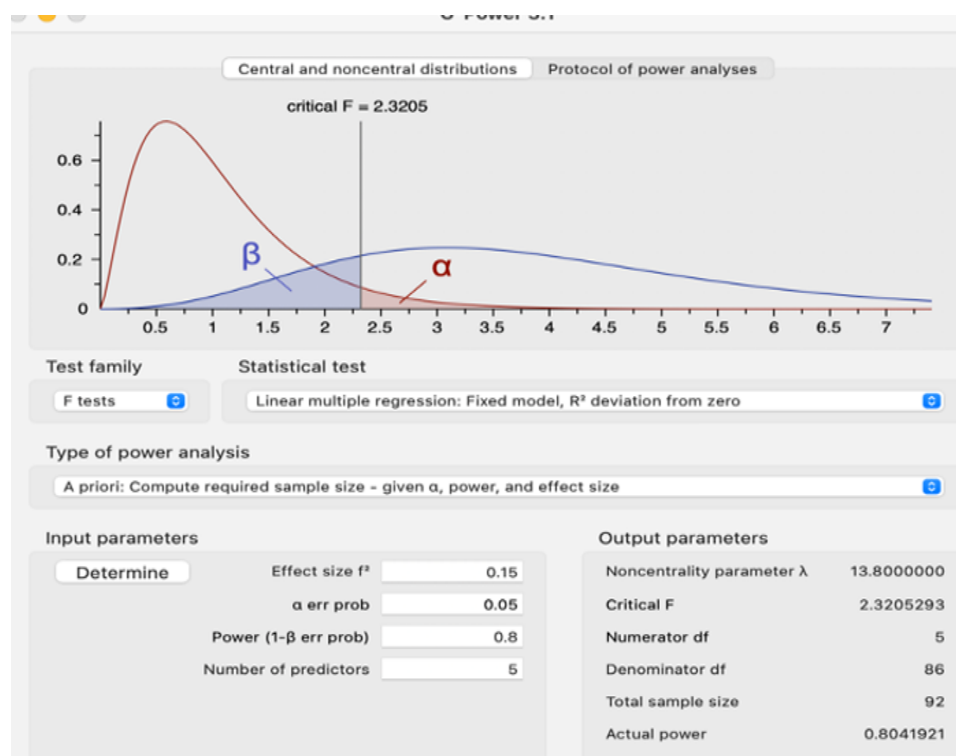
Note. Content in figure is snapshot from Soper’s free statistic calculator (Soper, 2024).

(<https://www.danielsoper.com/statcalc/calculator.aspx?id=89>). In the public domain.

The researcher rounded up to a sample size of 250 (Andrade, 2020; Wolf et al., 2013). The sample size of 250 aligns with SEM general rules of thumb and is feasible for the researcher to attain. G*Power is an independent vendor algorithm and did provide one estimate. The estimate was 92 sample size. The input parameters were: 0.15 effect size, five predictor variables, .05 alpha error probability, and .80 statistical power (see Figure 3). Based on the initial computations, the researcher rounded up to a larger sample number size. This ensured greater accuracy and generalizability, and to account for the possibility of unusable responses.

Figure 3

*Graphical Representation and Data from the G*Power Software Computation*



Note. Figure is a snapshot from output produced by G*Power version 3.1 software (Faul et al., 2007). In the public domain.

The research was presented to the National University Institutional Review Board (IRB) for review to ensure all rules and ethics were followed pertaining to dissertations.

Research Questions and Hypotheses

RQ1

What is the relationship between a dispute mediator's *attitude* toward the use of the statistical methods convention for dispute mediators; and a dispute mediator's *intention* to use the statistical methods convention for dispute mediators?

H1₀

There is no significant correlational relationship between a DM's *attitude* towards the use of the SMC-DM; and a DM's *intention* to use the SMC-DM.

H1_a

There is a significant correlational relationship between a DM's *attitude* towards the use of the SMC-DM; and a DM's *intention* to use the SMC-DM.

RQ2

What is the relationship between a dispute mediator's *subjective norms* regarding the use of the statistical methods convention for dispute mediators; and a dispute mediator's *intention* to use the statistical methods convention for dispute mediators?

H2₀

There is no significant correlational relationship between a DM's *subjective norms* regarding the use of the SMC-DM; and a DM's *intention* to use the SMC-DM.

H2_a

There is a significant correlational relationship between a DM's *subjective norms* regarding the use of the SMC-DM; and a DM's *intention* to use the SMC-DM.

RQ3

What is the relationship between a dispute mediator's *perceived behavioral control* towards the use of the statistical methods convention for dispute mediators; and a dispute mediator's *intention* to use the statistical methods convention for dispute mediators?

H3₀

There is no significant correlational relationship between a DM's *perceived behavioral control* towards the use of the SMC-DM; and a DM's *intention* to use the SMC-DM.

H3_a

There is a significant correlational relationship between a DM's *perceived behavioral control* towards the use of the SMC-DM; and a DM's *intention* to use the SMC-DM.

RQ4

What is the relationship between a dispute mediator's *perceived usefulness* towards the use of the statistical methods convention for dispute mediators; and a dispute mediator's *intention* to use the statistical methods convention for dispute mediators?

H4₀

There is no significant correlational relationship between a DM's *perceived usefulness* towards the use of the SMC-DM; and a DM's *intention* to use the SMC-DM.

H4_a

There is a significant correlational relationship between a DM's *perceived usefulness* towards the use of the SMC-DM; and a DM's *intention* to use the SMC-DM.

RQ5

What is the relationship between a dispute mediator's *perceived ease of use* towards the use of the statistical methods convention for dispute mediators; and a dispute mediator's *intention* to use the statistical methods convention for dispute mediators?

H5₀

There is no significant correlational relationship between a DM's *perceived ease of use* towards the use of the SMC-DM; and a DM's *intention* to use the SMC-DM.

H5_a

There is a significant correlational relationship between a DM's *perceived ease of use* towards the use of the SMC-DM; and a DM's *intention* to use the SMC-DM.

RQ6

How does a dispute mediator's *attitude* towards the use of the statistical methods convention for dispute mediators; intervene in the relationship between a dispute mediator's *perceived usefulness* of the statistical methods convention for dispute mediators, and a dispute mediator's *intention* to use the statistical methods convention for dispute mediators?

H6₀

There is no significant correlational intervention, by a DM's *attitude* towards the use of the SMC-DM; on the relationship between a DM's *perceived usefulness* of the SMC-DM, and a DM's *intention* to use the SMC-DM.

H6_a

There is a significant correlational intervention, by a DM's *attitude* towards the use of the SMC-DM; on the relationship between a DM's *perceived usefulness* of the SMC-DM, and a DM's *intention* to use the SMC-DM.

RQ7

How does a dispute mediator's *perceived usefulness* of the statistical methods convention for dispute mediators; intervene in the relationship between a dispute mediator's *perceived ease of use* of the statistical methods convention for dispute mediators; and a dispute mediator's *attitude* towards the use of the statistical methods convention for dispute mediators?

H7₀

There is no significant correlational intervention, by a DM's *perceived usefulness* of the SMC-DM; on the relationship between a DM's *perceived ease of use* of the SMC-DM, and a DM's *attitude* towards the use of the SMC-DM.

H7_a

There is a significant correlational intervention, by a DM's *perceived usefulness* of the SMC-DM; on the relationship between a DM's *perceived ease of use* of the SMC-DM, and a DM's *attitude* towards the use of the SMC-DM.

Significance of the Study

The research conducted on the topic will benefit many stakeholders in the domains of literature, practice, and policy governance. The theoretical perspective that guides the study may be further supported by the research. The domain of academic Literature will profit as the extended TPB as a framework to conduct behavioral change interventions, will be applied to the field of dispute mediation. Additionally, the literature is built upon by this study examining an extended TPB model with the addition of the variables of perceived usefulness, and perceived ease of use. Advantage will be gained in the academic literature by using the extended TPB to explain the mediator's intention to use the SMC-DM as a *Proactive Intervention* protocol in the mediation process; to *change by anticipating* the disruptive events, intervening, and in advance

reducing or eliminating their negative effect on organizational relationships and organizational goals (Howieson et al., 2024; Lempereur et al., 2021; NACM, 2021; Steinmetz et al., 2016).

Transformation to more positive relationships that are functionally rewarding is a main goal of the mediation process.

Practice will benefit in many ways from the information provided by way of the research concerning SMC-DM with a focus on proactive intervention mediation techniques. Strategic management in the area of project management and mediation intervention methodology may be informed by the research. The research will add information concerning data analytics to the initiating process, planning process, executing process, monitoring-controlling process, and closing process of the project management paradigm and the connected convening process, opening process, communication process, negotiating process, and closing process of the mediation intervention methodology (NACM, 2021; Parker et al., 2015). Additionally, organizational leaders in the area of Strategic management may benefit from the research. Such benefit will come by developing innovative mediation intervention programs and by considering promoting prevention-orientated proactive mediation activities in addition to their existing response-orientated reactive mediation activities (NACM, 2021; Parker et al., 2015; Wing et al., 2021). Strategic managers working in mediation and using their SWOT conceptual and analytical model may also benefit from the research information. The benefit may come by considering aspects of the external environment/internal environment experience and assessing to what extent extraneous indicators influence the dispute mediation process.

Organizational policy and governance will benefit in many ways as well from the information provided by way of the SMC-DM, with a focus on proactive intervention mediation techniques. The dispute resolution environment includes the litigation process, the arbitration

process, the mediation process, and the party settlement process (NACM, 2021; Wing et al., 2021). The mediation process stands alone, providing a unique approach to dispute resolution. Self-determination is the cornerstone of mediation, with the DM in place to provide guidance through the mediation procedures and support with respect to the efficacy experience (NACM, 2021). Policy benefits because self-determination strengthens the human dynamics of resolve, thereby improving relationships and improving organizational performance. The findings from the research may inform organizational policymakers to refine internal procedures and rules for improved efficiency and fairness in the area of organizational disputes.

Definition of Key Terms

Certified Dispute Mediator

The person administering the dispute process: The term certified dispute mediator, refers to an impartial neutral third party who facilitates the resolution of a dispute between two parties and gives them support and guidance to arrive at a self-determined resolution to the dispute. The individual is certificated by a Regional, National, or State entity, such as a National Association or a Federal or State Court of Law (Lempereur et al., 2021; Moore, 2014; NACM, 2021).

Dispute Mediation

The dispute process: The term mediation describes a process of conflict resolution involving a third party who helps persons who are involved in a dispute. The third-party known as a dispute mediator, also known as a neutral, facilitates the parties to arrive at a mutually acceptable solution to their disputes (Lempereur et al., 2021; Moore, 2014).

Predictive Change Intervention

Collects relevant data: Use of statistical data analytics to provide strategic management with a data forecasting tool by referring to collected data, concerning the condition of behavior,

such data is used to anticipate and avoid future potential problems before they occur. Used to create ranges of acceptable behavior, and framework for future risk exposure (Latilo et al., 2024; Wing et al., 2021).

Preventive Change Intervention

Use of statistical data analytics to provide strategic management the ability to routinely scan for trends and patterns of behavior. To take steps to avoid potential problems before they occur (Latilo et al., 2024; NACM, 2021; Wing et al., 2021).

Proactive Change Intervention

Anticipating, get to the root cause: Use of statistical data analytics to provide strategic management ability to early on observe trends and patterns of behavior metrics, to identify, intervene, and resolve potential problems before they occur (Latilo et al., 2024; NACM, 2021; Wing et al., 2021).

Reactive Change Intervention

Responsive to a situation: Use of statistical data analytics to provide management the ability to react to problems as they arise (Latilo et al., 2024; NACM, 2021; Wing et al., 2021).

Statistical Methods Convention-for Dispute Mediators (SMC-DM)

The SMC is a label and concept for a scientific method that includes an array of statistical tools, such as statistical algorithms and software, database sources, data analytics, and artificial intelligence (AI); an integrated alliance of statistical methods, digital infrastructure, AI, AR, and VR; used to explain, determine, or predict a phenomenon; which is available for dispute mediation (Latilo et al., 2024; Wing et al., 2021; Zeleznikow, 2021).

Summary

Chapter 1 included an introduction to the topic of dispute resolution between and within organizations. Specifically, the topic related to the use of the SMC-DM by DMs. A problem statement and a purpose statement were described in relation to the topic area. Specifically, the problem is that for DMs the SMC-DM may not be widespread or maybe met with some degree of skepticism. The purpose of the study is to better understand the DM's perspective, and gain information on predicting the behavioral intentions of DMs regarding the use of the SMC-DM, by way of the theoretical framework TPB extended by TAM constructs. Finally, the research design and methods were briefly discussed, noting a quantitative approach, correlational design, structural equation modeling analysis, and data collection by survey questionnaire. The next chapter will provide a review of the literature concerning the research topic.

Chapter 2: Literature Review

The problem to be addressed in this study was that dispute mediators' use of the proactive Statistical Methods Convention (SMC) is not widespread and is met with resistance in the dispute mediation process, even though it has been demonstrated that SMC can increase efficiency and provide improvement. The purpose of this quantitative correlational design research was to better understand the dispute mediator's perspective and gain information on predicting the behavioral intentions of dispute mediators regarding the use of the statistical methods convention for dispute mediators by way of the theoretical framework of the TPB extended by technology acceptance model (TAM) constructs. Currently, much of the research addresses *reactive change* interventions, which are responsive in nature and are intended to timely resolve the dispute.

The unfavorable impact is becoming more apparent due to the reactionary dispute resolution backlog, leading to overloaded case workers and increased economic costs (Dirrler & Podruzsik, 2022; Wing et al., 2021). Within organizations, leaders often have to orchestrate processes to resolve disputes that arise under various circumstances.

The dispute mediation process and the dispute mediator, also known as a neutral, are part of the paradigm that is in place to bring about change affecting disputants (Brummans et al., 2022). Between the conflicting parties, the mediator/neutral works as a guide to manage the mediation process. Such management includes the mediator working as an impartial facilitator to support the party's negotiations while ensuring the negotiations align with the procedural steps of the mediation process (Moore, 2014)). Resolution is accomplished through mutual assent agreements, which are driven by the theorized self-determination efforts of the disputing parties (Bathina & Sitamanikyam, 2023; National Association of Mediators [NACM], 2021). The

dispute mediator guides, manages, and facilitates the parties coming to a mutually assented agreement. Within an organizational context, the dispute mediator is responsible for managing current dispute challenges, which may require a current reactive response (NACM, 2021). Also, the dispute mediator manages foreseeable dispute challenges, which may require a future-oriented proactive response. The mediator requires tools that can outlay a plan to react to disputes and tools that outlay a plan to anticipate disputes for prevention or abatement efforts (Dahlan et al., 2021; Latilo et al., 2024; Moore, 2014).

This literature review provides background information on dispute mediation within organizations, and the importance for organizational leadership. Also, background information is provided regarding the statistical methods convention. Additionally, the literature review covered information concerning the theoretical framework that guides the research, and hypotheses development. The literature review is concluded with a summary. Particular sub-topics are included within these general areas. The sub-topics and themes are summarized in Table 1.

Table 1

List of Themes that are Included in the Literature Review

General Topics	Sub-Topics
Theoretical Framework	<ul style="list-style-type: none"> • The Guiding Framework • Definition of Framework Constructs • Origin of Framework • Other Potential Frameworks • Why an Extended TPB Theory was Selected for Current Project • Hypotheses Development
Organizational Dispute Mediation	<ul style="list-style-type: none"> • What is Dispute Mediation? • The Importance of Organizational Dispute Mediation • The Linear Analysis Nature of Reactive and Proactive Dispute Mediation
The Statistical Methods Convention	<ul style="list-style-type: none"> • What is the Statistical Methods Convention (SMC)? • Data Analytics: Traditional, Big Data, Artificial Intelligence and Virtual Reality • Reverse Chronology: Of the Statistical Methods Convention • Expansion Potential of the SMC-DM • Factors of Aversion to the SMC
Summary	

Literature Search Strategy

The researcher followed a strategy to search the scientific and academic literature to gain a broad and detailed understanding of the research study topic. The strategy includes accessing several scholarly literature databases such as National University (NU) NavigatorSearch, ProQuest, Ebsco Business Search, Wiley Online Library, Springer Link, Academic Search Complete, Science Direct, Taylor and Francis Online, Business Source Complete, Gale Database, and Google Scholar. The strategy also includes the use of key words related to the topic area to search the databases to discover relevant materials that could help inform the research study. Boolean searching, with the use of an operator such as AND, is also used between key terms to help narrow down a search (Ridley, 2012). The key words and combinations of key words used for the search included relevant terms such as organizational dispute, dispute mediation, data-analytics, artificial intelligence, online dispute resolution, and big-data. An additional strategy for the search of literature involves the use of database features to find similar or related articles to what was found. An important part of the academic literature search is to ensure that the materials are credible. Credibility is bolstered when the material comes from academic journals that are refereed and peer reviewed (Checco et al., 2021). The researcher ensured that materials had the appropriate credibility. Also, checking the reference lists of research articles found leads to additional relevant research is a part of the strategy (Ridley, 2012). Newer research or seminal research may be discovered in this fashion.

Theoretical Framework

A description of the guiding theoretical framework is provided here, along with a review of the individual constructs included in the framework. The background and usage of the theoretical framework are examined. A comment is made on other potential frameworks and why

the particular framework was chosen. Additionally, a consideration of how the framework guides the development of the research problem, purpose, research questions, and hypotheses development is given.

The Guiding Framework

The extended theory of planned behavior (TPB) is a behavior change theory that has been connected to a variety of change intervention methods used to make adjustments to social behavior (Jiao & Cao, 2024; Lee et al., 2020). The presence of its usage is represented across many domains. The extended TPB connection allows for the investigation of the mechanisms of action by way of analyzing the pathways that influence the desired change effect, with the addition of the TAM constructs of perceived ease of use, and perceived usefulness (Ma & Lei, 2024; Steinmetz et al., 2016). To this end, the extended TPB holds a noteworthy distinction in many domains, with its ability to explain specified source pathways and its ability to predict outcomes. The extended TPB has frame-worked the guide to the discovery of explanations and forward predictability in domains such as business, employment, law, education, the care of health, and the care of social well-being (Ajzen, 2020; Steinmetz et al., 2016). For example, the domain of law includes the arbitration and litigation change processes, while the domain of social well-being includes the sub-domains of dispute mediation self-determination change process, with statistical-based conventions that complement a variety of methodologies.

For example, due to inevitable changes in social, historical, or economic norms, organizations have to change, adapt, and evolve to sustain their existence. The extended TPB with TAM constructs is a change theoretical perspective. The researcher did use the extended TPB to analyze the attitudes, norms, and conditions that contribute to the influence of changing the behavioral intention outcome variable (Ajzen, 1991, 2020, 2024; Troise et al., 2020). For an

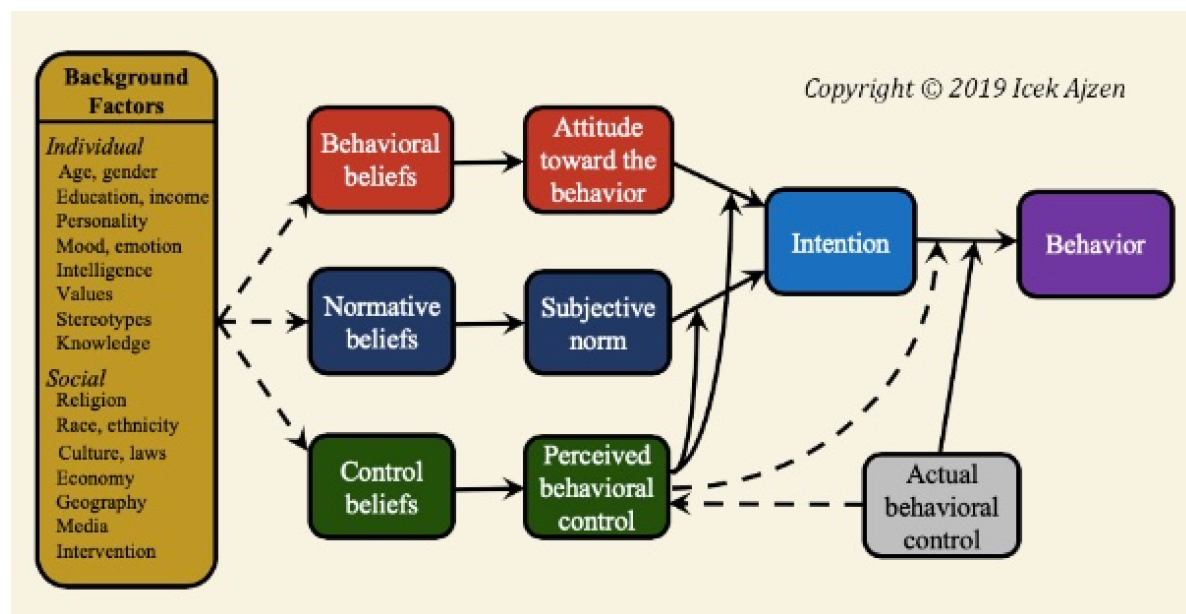
organization, the use of this extended TPB theoretical approach leads to change transformation and transitioning into sustaining competitive advantage, and competitive control in performance. Organizations periodically invest in transformation efforts in order to transition the organization to meet the demands of a changing environment. For example, many organizations rely on transformation mechanisms such as dispute mediation's self-determination skills to make adjustments to employee behavior, and a smooth transition may occur (Pasi et al., 2021). Examples of other complimentary change mechanisms include structural and measurement modeling skills and conventions that include a variety of statistical methods to make transformational transition assessments and adjustments (Steinmetz et al., 2016).

The extended TPB model illustrates the concept of there being an ultimate behavioral intention to commit to something, such as in making a decision, performing an action, or introducing a transformational intervention. Behavioral intention happens at the end of the extended TPB process, and alongside the ultimate behavioral intention to decide or do an action, there are five contributing components in the extended TPB theoretical model (Ajzen, 1991, 2020, 2024; Jiao & Cao, 2024). The pathways that influence behavioral intention include several factors. In terms of contributions, the ultimate behavioral intention is influentially predicted by: (a) belief-based attitudes towards a phenomenon, (b) belief-based normative posturing about a phenomenon, (c) control beliefs, (d) perception of usefulness, and (e) perception of ease of use, that facilitates or hinders the committing or doing of an action (Ajzen, 1991, 2020; Fishbein & Ajzen, 2010; Lee et al., 2020). For example, the ultimate outcome to be examined may be to assess a dispute mediator's intention to use the SMC in the dispute mediation process. To accomplish the assessment, the contributing components of attitude, norms, controls, perceptions of usefulness, and ease of use would have to be analyzed for their relationships, variability,

trends, and patterns. Researchers have previously found intention is the best indicator that supports a resulting behavior (Ajzen, 2020; Fishbein & Ajzen, 2010; Steinmetz et al., 2016). Due to the importance of the intention variable, knowledge concerning the contributing components of intention is of equal importance (see Figure 4).

Figure 4

Theory of Planned Behavior with Background Factors



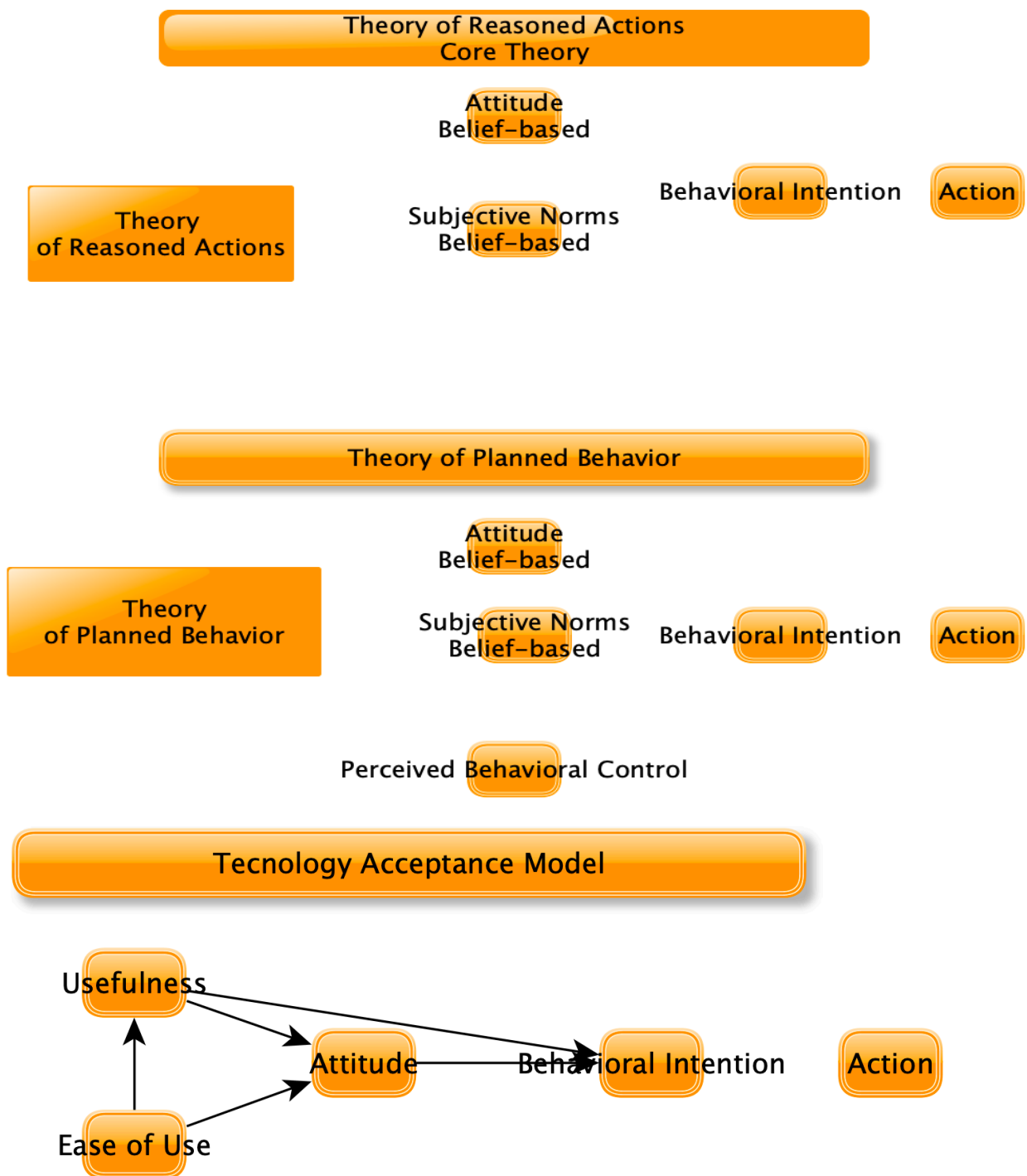
Note. Content in figure is snapshot from Ajzen's website on the TPB (Ajzen 2020, 2024).

(<https://people.umass.edu/aizen/tpb.diag.html>). Used by permission.

The theory of reasoned actions is core to two theories. It is the core of the theory of planned behavior (TPB), and it is the core of the technology acceptance model (TAM) (see Figure 5). The theory of planned behavior is built upon the theory of reasoned action by the addition of one predictor variable of perceived behavioral control (Fishbein & Ajzen, 2010). The theory of reasoned action is the core ideology with the focus on behavioral intention, as supported by belief-based attitudes, and perceived social norms. A graphical illustration of the evolution of the theories is shown in Figure 5.

Figure 5

Graphical Illustration of the Evolution of TRA to TBP and TAM



Sources: (Authors Own Work; Ajzen, 2020; Davis et al., 1989; Fishbein & Ajzen, 2010).

The TPB is a very powerful theory and primarily contributes to the literature as an explainer, predictor, and an intervention used in the area of change transformation (Steinmetz et al., 2016). The TPB with the extension is used as a guide to explain and predict a particular phenomenon under study.

Definition of Framework Constructs

Intention. The TPB's main focus is on an individual's dependent and responsive behavioral intention to perform an action or make a decision. Such behavioral intention is influenced by an individual's independent and explanatory belief based-attitudes, normative beliefs, and belief-based controls; on the other hand, from a transformational perspective, such dependent behavior intention can be influenced to change, by way of changing an individual's independent belief-based attitudes, belief-based norms, and belief-based controls (Ajzen, 2020, 2024; Fishbein & Ajzen, 2010).

Belief-Based Attitude. In the TPB, belief-based attitude is a construct and is a primary contributor to the behavioral intention to do an act. In research, the TPB attitude element has several definitions representing many points of view. From a variety of definitional perspectives, attitude is defined as “. . . a latent disposition to respond to some degree of favorableness or unfavorably to a psychological object” (Fishbein & Ajzen, 2010, p. 76), as other researchers indicate that attitude is an *evaluative* response (Kruglanski & Stroebe, 2005). Belief-based is the pre-existing point of view that influences and shapes the attitude. Studies have shown by measurement that the belief-based attitude construct may be the most statistically significant contributor that influences behavioral intention, fore-running perceived social norms, and behavioral controls (Ajzen, 2020; Fishbein & Ajzen, 2010). In the current research project, this construct of the TPB informs the research, under varying organizational circumstances

where an individual who has more favorable attitudes towards the SMC, will be more likely to use the SMC.

Belief-Based Subjective Norms. In the TPB, perceived social norms is a construct and a noteworthy contributor to the behavioral intention to do an act. In research, the TPB's belief-based social norms element has an expanded definition derived from the core theory of reasoned action. According to Fishbein and Ajzen (2010), subjective norms “. . . referred to a specific behavior prescription or proscription attributed to a generalized social agent . . . an individual's perception that most people who are important to them influence their thoughts to do or not do a behavior” (p. 131). In the current research project, this construct of the TPB informs the research under varying organizational circumstances where an individual who is influenced by significant others or colleagues to use the SMC will be more likely to use the SMC.

Belief-Based Perceived Behavioral Control. In the TPB, perceived behavioral control is a construct of great significance and importance, due to its role as a moderator in the TPB model, the perceived behavioral control construct has a weighing effect on the other constructs. The perceived behavioral control construct is a moderator construct that interacts with the other constructs to directionally increase or decrease the other constructs' behavior (Fishbein & Ajzen, 2010). As a moderator, the perceived behavioral control construct interacts with: (a) the attitude construct, effectively increasing or decreasing the likelihood of attitudinal change; (b) the subjective norm construct, effectively increasing or decreasing the likelihood of the degree of subjective norm influence; and (c) by way of its combined effect on attitudes and subjective norms indirectly influences the effect on the construct behavioral intention to do an act.

According to Fishbein and Ajzen (2010), perceived behavioral control:

Is the extent to which people believe that they are capable of performing a given behavior, that they have control over its performance . . . it is assumed to take into account the availability of information, skills, opportunities, and other resources required to perform the behavior as well as possible barriers that may have to be overcome. (pp. 154- 155)

In application to the current research project, this construct of the TPB informs the research. Under varying circumstances, individuals who believe they do not have control over doing a behavior have a lower likelihood of doing that behavior, and individuals who believe they have control over doing a behavior have a higher likelihood of doing that behavior (Fishbein & Ajzen, 2010).

The Technology Acceptance Model: The Constructs of Usefulness and Ease of Use.

The TAM is an expansion of the core theory of reasoned actions (see Figure 5), and is related to the TPB. The TAM seminal researchers used the definitional constructs and theoretical perspective of the theory of reasoned actions as foundational building blocks for the TAM model:

TAM, introduced by Davis (1986), is an adaptation of TRA specifically tailored for modeling user acceptance of information systems. The goal of TAM is to provide an explanation of the determinants of computer acceptance that is general, capable of explaining user behavior across a broad range of end-user computing technologies and user populations, and added the perception of usefulness construct and the perception of ease-of-use constructs. (Davis et al., 1989, p. 985)

Both newly added constructs directly predict the behavioral intention to do an act. However, the constructs also predict onto attitude, which mediates and produces an indirect effect on

behavioral intention to do an act (Davis et al., 1989). The technology acceptance model, with its theory of reasoned action foundation, has a lasting and increasing relevance in the current forward-moving technological global society.

Perception of Usefulness. In the TAM, perception of usefulness is a construct of great significance and importance, due to its role as part of the mediator triangle in the TAM model. The construct directly and indirectly affects the behavioral intention to do an act. According to Davis et al. (1989), usefulness is defined within the context of any organization that there is a subjective perception of usefulness when an application increases performance for that individual, a subjective likelihood that using an application will increase their performance. In the application to the current research project, this construct of the TAM informs the research under varying organizational circumstances, where individuals who believe that the statistical methods convention will increase their performance will find the SMC useful.

Perception of Ease of Use. In the TAM, the perception of ease of use is a construct of a lesser degree of importance. However, it does have a mediating effect that may intervene to, directly and indirectly influence the behavioral intention to do an act. According to Davis et al. (1989), ease of use is defined within the context of any organization; there is a subjective perception of ease of use when an application has a tendency to make a performance effortless. In the application to the current research project, this construct of the TAM informs the research under varying organizational circumstances where an individual who believes that the statistical methods convention is easy to use and requiring little effort, will likely use the SMC.

Origin of Framework: Two Theories That Underlie the TPB

The theory of planned behavior, as a theoretical perspective, is based upon the social psychological theory, which is a social theory that explains how individuals take in information

and respond to that information through their ability to perceive, learning, thinking, memory, sensation, motivation, and emotion (Jiao & Cao, 2024; Ma & Lei, 2024; Troise et al., 2020). The theory explains that an individual's behavioral intention to perform an act is influenced or is caused to change due to the psychological processes of belief-based attitude, belief-based norms, and belief-based controls. According to Fishbein and Ajzen (2010), "beliefs represent the information people have about a behavior; providing new information can change these beliefs, and thus be an effective way of changing behavioral intentions and actions" (p. 322). The TPB theory links beliefs to belief-based attitudes, perceived social norms, and perceived behavioral controls, which come together to shape an individual's intention to make a decision or perform an action. The TPB theory supports the proposition that changes to behavioral intention can be accomplished by changing the underlying beliefs that are linked. The TPB theory considers how cognitive factors of behaviors, norms, and controls are linked to beliefs. The TPB provides an explanation concerning an individual's behavioral intention as affected by belief-based attitudes, perceived social norms, and perceived behavioral controls.

Additionally, the social cognitive theory indirectly contributes to the TPB. The social cognitive theory is a set of procedures concerning the acquisition of knowledge through thought, experience, and senses (Chan et al., 2020). The social cognitive theory postulates that an individual's intention to perform a behavior is influenced, or is a cause of change, due to the cognitive processes of behavioral, normative, and controls (Fishbein & Ajzen, 2010). The social cognitive theory is involved in decision-making procedures that emphasize a focus on (a) how an individual thinks about a phenomenon and (b) how to evaluate a behavior before deciding to form the intention to act.

Other Potential Frameworks

In the current research project, there are several underlying theories that collectively contributed to the depth and breadth of the study of the dispute mediator's behavioral intention to use the statistical methods convention in the practice of dispute mediation. Three of those theories are sourced by way of extending the seminal theory of reasoned action by Ajzen and Fishbein (1980). The fourth theory is the self-determination theory, which stands as a theory concerning an individual's internal and external motivational mechanisms that push them to form the intent to do an action.

The constructs of the TRA have an effect on the subsequent outgrowth of theories, such as the theory of planned behavior, the theory of reasoned goal pursuit (TRGP), and the technology acceptance model (Fishbein & Ajzen, 2010; Hamilton et al., 2024). The core focus is on the responsive construct of behavioral intention to do an act. The TRA explains that contributing explanatory factors of belief-based attitudes and belief-based perceived norms provide the foundational dynamic push forward under compelling circumstances. The expanded development of the TRA, such as in the TPB, TRGP, and TAM models, provides additional explanatory constructs for additive contribution. The effect of adding these expanded explanatory constructs has the propensity to push forward behavioral intention as well.

The commonality between the TRA, TPB, TRGP, TAM, and the SDT is that they are motivational theories, having a feature of trying to explain what drives an individual to consciously form the intent to do an act, from several different perspectives, for example psychological or cognitive perspective. Through construct analysis, these theories go beyond observational recognition, but investigate the reason why an individual does an act.

From the TRA perspective, the key identifying motivators are that of an individual's *underlying beliefs*, as being responsible for driving forward an individual's attitude; and *underlying beliefs* driving perceptions of norms concerning a phenomenon (Ajzen & Fishbein, 1980). The TRA has formed an early theoretical basis for future development of research models.

From the TPB perspective the motivational aspects that influence behavioral intention to use, are the driving forces consisting of: (a) the belief factors driving an individual's attitudes, (b) the belief factors about what significant others think, and (c) the belief factors about one's ability or competency to perform (Fishbein & Ajzen, 2010). The distinction between the TPB and the TRA is the addition of the perceived control construct concerning ability or competency to engage in a given behavior.

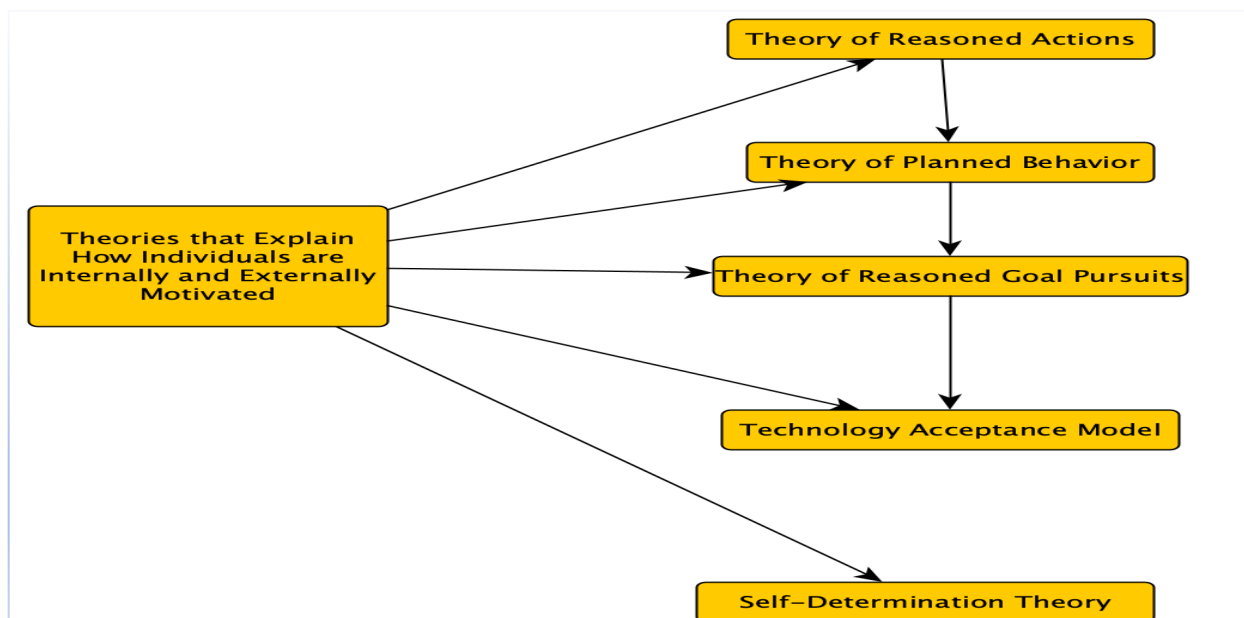
From the TRGP perspective the motivational aspects that influence behavioral intention to use, are the driving forces consisting of: (a) the belief factors driving an individual's attitudes, (b) the belief factors about what significant others think, (c) the belief factors about one's ability or competency to perform and (d) an individual's desire to achieve procurement goals and behavioral approval goals (Hamilton et al., 2024). The TRGP builds upon the predecessor TPB by including the additional constructs regarding motivating goals of procurement and approval.

From the TAM perspective the motivational aspects that influence behavioral intention to use, are the driving forces consisting of: (a) the belief factors driving an individual's attitudes, (b) perceptions of a technology's usefulness, and (d) perceptions of a technology's ease of use (Davis et al., 1989). The TAM used the TRA as a foundation, adding in the constructs of perception of usefulness and perception of ease of use, as applied to the belief-based attitude from the TRA.

From the SDT perspective the motivational aspects that influence behavioral intention, are the driving forces consisting of: (a) the belief factors concerning an individual's ability or competency to perform, (b) the belief factors about self-governing autonomy, and (c) the belief factors about connectivity and relatedness (Pasi et al., 2021). The distinguishing feature of the SDT is the individual's independent self-guidance and direction.

Another commonality between the TRA, TPB, TRGP, TAM, and SDT is their reactive nature and their predictive nature. Meaning that they are purposed to be responsive by providing an explanation through the use of construct analysis about (a) what was observed and (b) offering possible explanations about why the phenomenon occurred (Fishbein & Ajzen, 2010; Hamilton et al., 2024; Pasi et al., 2021). Their predictive nature allows for future analysis. Meaning that they are purposed to be proactive by providing an opportunity to project or forecast what an individual's future behavior may be, given indicated circumstances, allowing for interventions.

A commonality between the TRA, TPB, TRGP, TAM, and SDT concerning the ability to enhance strategic management is informative. In a transformational setting, when change is imminent and member acceptance is required, TRA, TPB, TRGP, and TAM may be used proactively to anticipate future behaviors. For example, by recognizing the underlying belief factors that motivate an individual's attitude towards doing an action, strategies can be developed to influence an attitude to change, by manipulating the underlying belief (Fishbein & Ajzen, 2010). Collectively and individually the TRA, TPB, TRGP, TAM, and the SDT, belief base manipulation technique is used when attempting transformation implementation efforts. A summary of the influential theoretical models is shown in Figure 6.

Figure 6*Other Potential Frameworks*

Sources: (Authors Own Work; Ajzen, 2020; Davis et al., 1989; Fishbein & Ajzen, 2010).

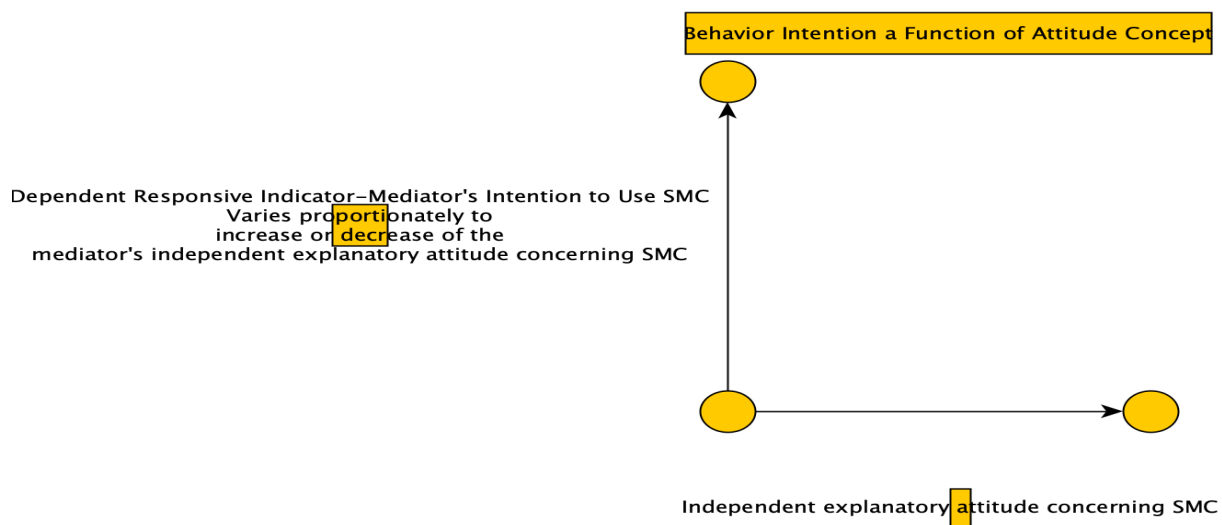
Why an Extended TPB Theory was Selected for Current Research Project

For example, in the current research study, the extended TPB was chosen to guide the research because the main focus is on the dispute mediator's dependent and responsive behavioral intention to use the statistical methods convention in the practice of dispute mediation. In order to understand the dispute mediator's behavioral intention, consideration must be given to behavioral factors such as the dispute mediator's belief-based attitudes, belief-based norms, belief-based controls, usefulness, and ease of use of the statistical methods convention. On the other hand, the researcher contends, from a transformational perspective, such behavioral intention can be influenced to change or be modified to use the SMC by way of changing a dispute mediator's independent belief-based attitudes, belief-based norms, belief-based controls, usefulness, and ease of use concerning the SMC.

The potential of the of the extended TPB Framework. The dispute mediator's ultimate behavioral intention to use the statistical methods convention is a function of the dispute mediator's belief-based attitude, belief-based subjective norms, belief-based perceived behavioral control, perception of usefulness, and perception of ease of use. This means the dispute mediator's intention to use the SMC is related to the extended TPB explanatory independent constructs, such that as any variable increases or decreases in direction or magnitude, so does the dispute mediator's intention to use the SMC increase and decrease (Ma & Lei, 2024; Troise et al., 2020). This relationship is a linear functional phenomenon and shows the proportional change in the two related quantities, i.e., it shows the *proportional change* in the dispute mediator's behavioral intention to use the SMC to the dispute mediator's belief-based attitude concerning the SMC (see Figure 7).

Figure 7

Concept: Behavioral Intention a Function of Attitude



Sources: (Author's Own Work; Ajzen & Fishbein, 1980).

How Extended TPB Guides the Study. The extended TPB was chosen as a guide for the research project because it charts out a plan to follow. For this research study, the extended TPB lays out a course of action to follow while examining the dispute mediator's responsive intentions to use SMC in the practice of dispute mediation, in relationship to the affecting explanatory relationships of belief-based attitude, belief-based norms, belief-based-controls, perceptions of usefulness, and perceptions of ease of use (Fishbein & Ajzen, 2010; Jiao & Cao, 2024; Varpio et al., 2020). The researcher also made decisions on potential data collection methods, and statistical analysis based on the underlying extended TPB research framework.

Guides Development of Problem, Purpose, Research Questions, and Hypotheses.

The extended TPB is a linear model with a focus on the variability of the dispute mediator's intention to use the SMC. However, the model also brings to life the explanatory pieces that together provide an explanation of what influenced that intention. For example, (a) was it the mediator's personal predisposition toward the SMC, (b) was the mediator influenced by significant others, (c) was the mediator confident in the ability to use and control SMC, (d) did the mediator perceive that SMC had usefulness in the practice of dispute mediation; and (e) did the mediator perceive that SMC was easy to use.

Purpose. Individually and collectively examining relationships provides empirical information, so that future predictions may be made concerning the mediator's behavioral intention to use the SMC in the practice of dispute mediation. The predictive ability of the extended TPB allows the model to support proactive remedial goals.

Research Questions and Hypotheses. The research questions (RQs) represent the extended TPB constructs in the study but through the point of view of the research topic (Varpio et al., 2020). The RQs are an outflow of the purpose of the research study. The RQs are the

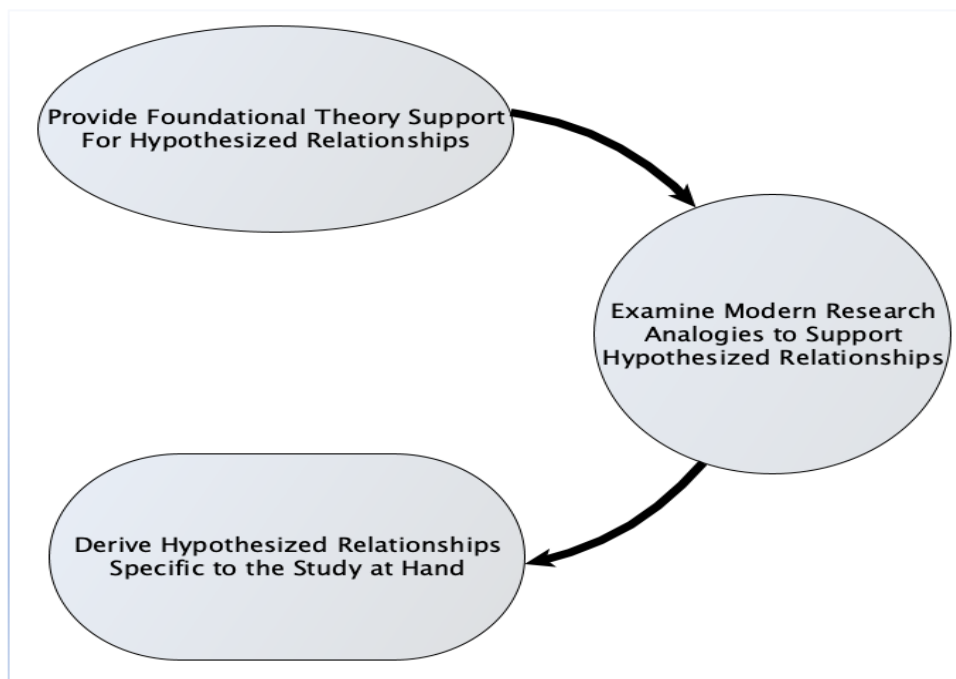
specific and appropriate questions to ask in order to get a relevant answer to the current research problem, as well as perhaps similar research problems in the future. Based on the topic of the study, the researcher spearheads this research by making proposals concerning the problem. Those proposals are topical but with limited evidence. Those proposals may put forward un-evidenced hypotheses that may be informational after evidentiary discovery and may support or not support existing null hypotheses on the topic.

Hypotheses Development

The researcher tested seven hypotheses, which included two of a statistical mediation nature. The development of the hypotheses was made by considering foundational theories and modern research that is on point to this research study. The hypotheses development strategy is depicted in Figure 8.

Figure 8

Hypotheses Development Strategy



Note. Infographic made by author, informed by concepts of Trochim et al (2016).

Behavioral Intention. The outcome variable of behavioral intention of the dispute mediator to use the statistical methods convention is described first because it was common with most of the hypothesized relationships to be tested. Ajzen and Fishbein (1980), in discussions of their TRA, describe behavioral intention as a motivated state of the individual to desire or want to engage in a particular behavior. Modern research has used the seminal theory to apply to the study of intention. Wang et al. (2024) provide empirical support for the behavioral intention to use Artificial Intelligence. Artificial Intelligence is part of the SMC paradigm.

Attitude. According to the TPB, and the TAM, belief-based attitude and intention have a relation. A person's belief-based attitude towards an object generally will have positive correlations with their intentions regarding that object (Davis et al., 1989; Fishbein & Ajzen, 2010). The belief-based attitude-intention relationship has a great deal of empirical support under many circumstances. Recent research has demonstrated that a person's belief-based attitude towards AI-assisted designing, predicts positively upon intention to use AI-assisted designing; and a person's belief-based attitude towards AI-assisted technology for banking and financial activity predicts positively upon the intention to use such technology (Ikhsan et al., 2025; Jiao & Cao, 2024). Therefore, the following hypothesis is derived: H1a - There is a significant correlational relationship between a DM's attitude towards the use of the SMC-DM; and a DM's intention to use the SMC-DM.

Subjective Norms. The TPB provides foundational support for the relation between belief-based subjective norms and behavioral intention. The foundational theoretical research demonstrated that how individuals process what their friends, family, and colleagues' opinions are regarding them engaging in a given activity, has a positive correlation to the individual engaging in that activity (Ajzen & Fishbein, 1980; Fishbein & Ajzen, 2010). Since the original

research, many scientific studies over the years have provided empirical support for the belief-based subjective norm-behavioral intention relationship. Recent research has also demonstrated the relationship in the context of SMC paradigm activities such as AI-assisted computer drafting, and AI-assisted banking and finance transactions (Ikhsan et al., 2025; Jiao & Cao, 2024).

Therefore, the following hypothesis is derived: H2a - There is a significant correlational relationship between a DM's subjective norms regarding the use of the SMC-DM; and a DM's intention to use the SMC-DM.

Perceived Behavioral Control. The underlying TPB theory also provides an empirical foundation for the relationship between the individual's perceived behavioral control over an activity, and the individual's intention to do such an activity. The extent to which the person perceives that they have control, or are inhibited by forces outside of their control over a particular activity, has a positive correlation to the individual's behavioral intention to engage in that activity (Ajzen, 1991; Fishbein & Ajzen, 2010). The TPB theoretical model with the belief-based perceived behavioral control variable has been validated by a vast amount of empirical research over the past twenty years. Researchers have recently used the TPB with the belief-based perceived behavioral control variable in relation to the SMC paradigm. For example, research demonstrated that the person's belief-based perceived behavioral control regarding AI-assisted designing, predicts upon intention to use AI-assisted designing (Jiao & Cao, 2024). Therefore, the following hypothesis is presented: H3a - There is a significant correlational relationship between a DM's perceived behavioral control towards the use of the SMC-DM; and a DM's intention to use the SMC-DM.

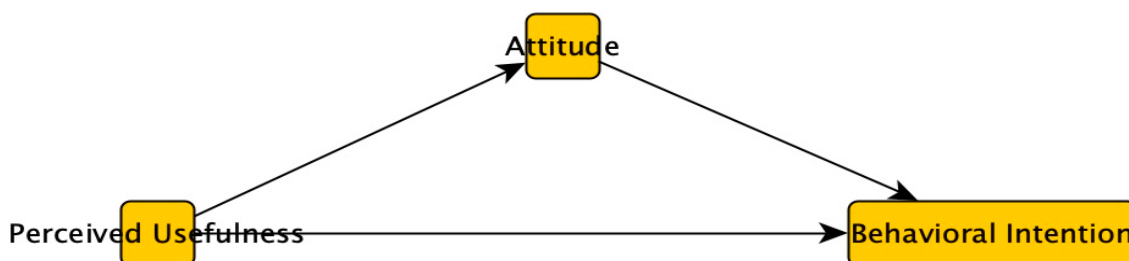
Perceived Usefulness. The perceived usefulness variable is part of the TAM theoretical model. The perceived usefulness variable is directly related to the behavioral intention variable.

The seminal researchers demonstrated that a user's perceived usefulness of technology such as computer technology has a positive correlation with the user's behavioral intention to use such computer technology (Davis et al., 1989; Park, 2009). Since the seminal research, a great deal of empirical data has confirmed the theoretical relationship. Recently, research has demonstrated the relationship between usefulness and intention in the context of the SMC paradigm. For example, it has been shown that people who perceive the use of AI and big data analytics to be highly useful to their activities will have a statistically significantly higher likelihood of intention to use AI and big data analytics (Kelly et al., 2023; Sukma et al., 2023). Therefore, the following hypothesis is constructed: H4a - There is a significant correlational relationship between a DM's perceived usefulness towards the use of the SMC-DM; and a DM's intention to use the SMC-DM.

Intervention of Attitude. However, in statistical mediation because of the intervention of attitude, the perceived usefulness variable is indirectly related to the behavioral intention variable. The seminal TAM theoretical model provides that attitude operates as a statistical mediator between the relationship of perceived usefulness and behavioral intention (Davis et al., 1989; Park, 2009). This indirect relationship is shown graphically in Figure 9.

Figure 9

Graphic Representation of Attitude as a Statistical Mediator



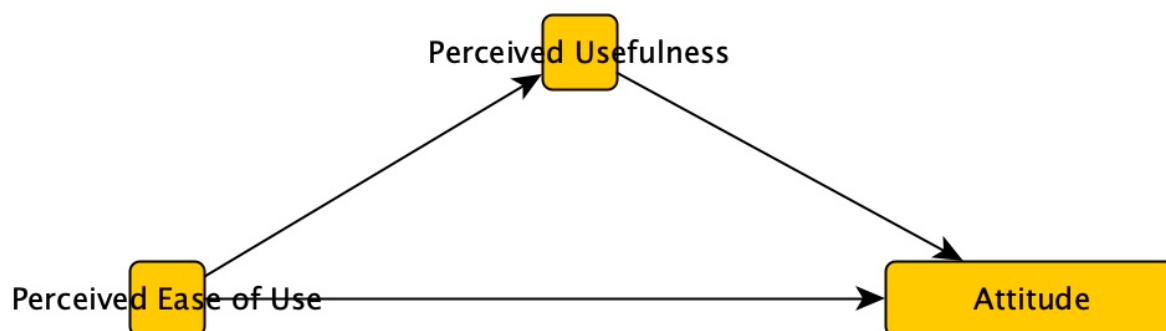
Note. Graphic made by author, informed by concepts of Davis et al (1989).

The research literature has demonstrated mixed results and empirical data on the viability of the mediation relationship. However, recent research related to Artificial Intelligence platforms as an aid to language development has shown a statistically significant mediation effect (Liu & Ma, 2024). This can be applied to the SMC. Therefore, the following statistical mediation hypothesis is offered: H6a - There is a significant correlational intervention, by a DM's attitude towards the use of the SMC-DM; on the relationship between a DM's perceived usefulness of the SMC-DM, and a DM's intention to use the SMC-DM.

Intervention of Perceived Usefulness. Another potential intervening relationship involves perceived usefulness. The seminal TAM theoretical model provides that perceived usefulness operates as a statistical mediator on the relationship between perceived ease of use and attitude (Davis et al., 1989; Park, 2009). This relationship is shown graphically in Figure 10.

Figure 10

Graphical Representation of Perceived Usefulness as a Statistical Mediator



Note. Graphic made by author, informed by concepts of Davis et al (1989).

Past research on the impact of statistical mediation by perceived usefulness has been mixed, and often researchers skip this analysis. However, recent research concerning application of the SMC has been made. The researchers found full mediation of the relationship between the perceived

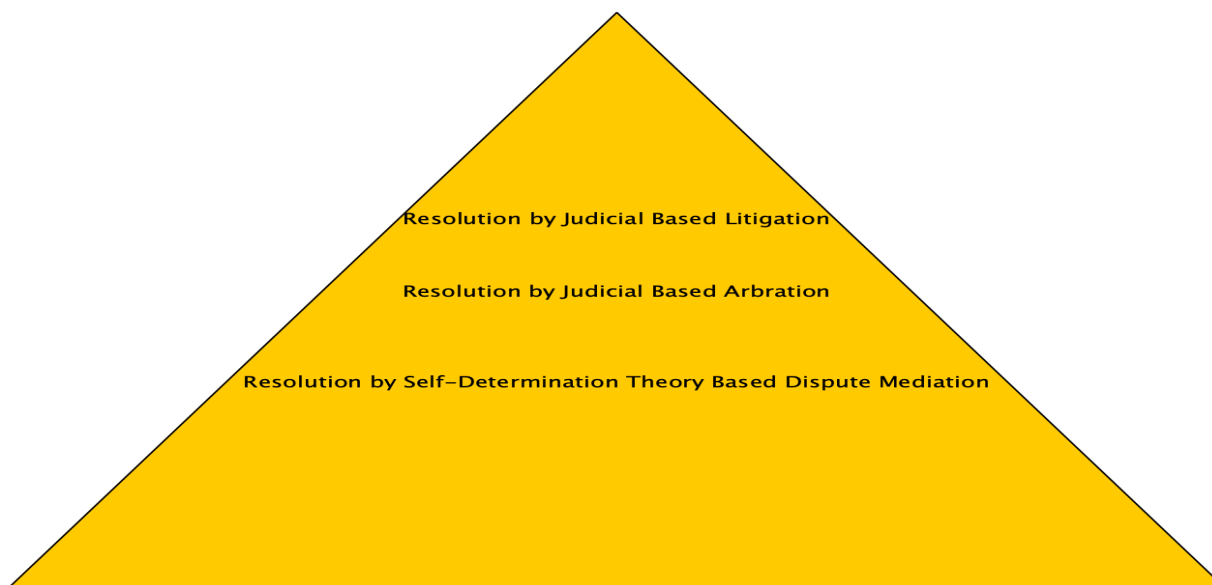
ease of use of AI tools for teaching and learning, and the attitude towards such tools (Kong et al., 2024). Therefore, the following hypothesis is set forth: H7a - There is a significant correlational intervention, by a DM's perceived usefulness of the SMC-DM; on the relationship between a DM's perceived ease of use of the SMC-DM, and a DM's attitude towards the use of the SMC-DM.

Organizational Dispute Mediation

Here, background on dispute mediation related to organizational leadership is provided, as well as a description of dispute mediation processes. The statistical methods convention is also described, along with the potential for use in the dispute mediation process. Additionally, factors that might aid in the expansion of the usage of the SMC are discussed.

What Is Dispute Mediation

Dispute mediation is the lowest stratum of the conflict resolution pyramid (see Figure 11). The middle stratum is judicial-based arbitration, and the upper stratum is judicial-based litigation. The conflict resolution pyramid also illustrates levels of formality, where the bottom is less formal, and the top is more formal.

Figure 11*The Conflict Resolution Paradigm*

Source: (Authors Own Work; NACM, 2021).

Self-determining dispute mediation is in a foundational position, as it serves as a supporting contributor to the two upper strata paradigms consisting of judicial arbitration and judicial litigation (NACM, 2021). Foundation-supporting contributions include early-stage discovery identifying disputed issues, early-stage discovery of evidence in support of disclosures, early-stage discovery of entity's commitment to participate in self-determination procedures, and early-stage discovery of entity's willingness to commit to mutual assent terms and standards.

Dispute mediation is a manifestation of the self-determination theoretical perspective and theorizes that when a dispute arises between conflicting entities, a dispute-mediated orchestrated environment is offered as a non-judicial impartial environment to enter into in order to resolve disputes by way of the self-determination theorized efforts of the disputing parties. In such an environment, entities can meet and confer to exchange communications concerning the identified topics of a dispute, negotiate exchanges concerning what each entity wants with the goal of

resolving those differences, and conclude with a resolution of mutual agreement between the entities concerning those indicated-disputed issues (NACM, 2021). Table 2 provides an illustration of the Dispute Mediation effort in comparison to Arbitration and Litigation.

Table 2

Levels of Dispute Resolution

	Foundational (Non-judicial) Dispute Mediation	Judicial Arbitration	Judicial Litigation
Theoretical Perspective	Self-Determination Theory	Judicial Theory	Judicial Theory
Theory Practiced	Mediators	Arbitrators and Attorneys	Judges and Attorneys
	Practice the Theory of Self-determination Motivational Theory	Practice Law Jurisprudence Theory	Practice Law Jurisprudence Theory
Party Selection	Parties Willing	Parties Willing	Parties in Conflict
Environment	Mediation Casual Environment On-line or brick-and-mortar	Arbitration Formal Legal Environment On-line or brick-and-mortar	Litigation Formal Court Environment On-line or brick-and-mortar
	Impartial Dispute Mediator Orchestrated	Impartial Judicial Arbitrator Orchestrated	Impartial Judge Orchestrated
Issue Identification	Party self-identify	Issues identified by disputants	Issues identified By disputants
	Issues identified by disputants	Communicated in complaint and cross complaint	Communicated in complaint and cross complaint
	Communicated during exchange		

Discovery	Party self- providing Early-discovery of evidence that support issue statement disclosures	Judicial: Mandatory Initial Disclosures Concerning evidence that will support statements in complaint	Judicial: Mandatory Initial Disclosures Concerning evidence that will support statements in complaint
Negotiate Settlement	Caucus procedure willingly entered into by disputing parties	Arbitration Judicial rules govern party negotiated settlements	Court Judicial rules govern party negotiated settlements
Outcome of Case	Party's Decision by Mutual Assent Finalized by: Contract	Arbitrator's Decision Finalized by: Award	Judge's Decision Finalized by: Judgement

Sources: (Martinez, 2020; NACM, 2021).

The Importance of Organizational Dispute Mediation

There are several relevant contributions made by the self-determination based dispute mediation system of rules and procedures, to provide foundational relevant information to the upper tiered conflict resolution systems of arbitration and litigation. In terms of contribution at the first stratum, the self-determination based dispute mediation is designed to give the disputants a choice to select who decides the outcome of their case. The choices are (a) do the disputants decide the outcome of their case, or (b) does another entity decide the outcome of their case; and do they want to resolve a dispute in an environment where mutual agreement is practiced, or do they want an environment where jurisdictional law is practiced (Moore, 2014; NACM, 2021). Contributions begin with the offering foundational ground-level ability for the dispute mediation process to serve as an informal, but mediation-ruled structured community venue. Collectively, disputants may voluntarily select dispute mediation as a choice of the system of rules.

The collective selection of self-determination dispute mediation by disputants is a choice of the system of rules and procedures, which the dispute mediation community recognizes as regulating the format of dispute mediation and regulating the actions of disputants partaking in the dispute mediation process, promoting greater economy and efficiency (see Table 3).

Table 3

Structure and Level of Formality Regarding Dispute Resolution

Process / Step	Informal	Formal
Dispute Mediation Intervention: Methodology	Self-determination Dispute Mediation Process	Jurisprudence Arbitration and Litigation Processes
Convene: Parties Ability to Make a Choice	Have Choice over Outcome	Have no Choice over Outcome
Convene: Choice of Environment	Casual	Formal Court Environment
Convene: Choice of Venue: Location of place where conflict is heard	According to community environment	According to venue and entity jurisdictional laws
Convene: Choices	According to what disputants want to arrive at a <i>Mutual Agreement</i> to resolve the dispute.	According to choice of law rules to be applied in specified jurisdictions
Opening	Goal Setting	Complaint, Answer, Motions
Communication exchange	Fact Determination Protocols	Evidentiary Law & Motion
Negotiation exchange	Communication and Caucus Exchange Between the Disputants	Judicial Deliberation
Closing/ Choice of Outcome	By Mutual Agreement	By Judicial Decision
Closing/ Choice of Winner	Both Parties Win	A Winner and a Loser

Sources: (Moore, 2014; NACM, 2021; Schaffer et al., 2025).

The process of self-determination based dispute mediation is used by many organizations in an effort to reduce or eliminate conflicts that may occur within or between organizations. The format of the process is designed to introduce a healing, casual, warm, and supportive social exchange between mutually consenting participants, who differ on identifiable points of interest (Moore, 2014; NACM, 2021). In conducting self-determination based dispute mediation, there are several standardized formats to follow that outline the environment and procedures to use in order to conduct self-determination based dispute mediation. The most prominently well-known is the Pepperdine Law School Dispute Mediation Model. The model flowcharts information concerning the ideal self-determination based dispute mediation environment, and procedural steps for the disputants to take to reach mutual assent. For example, (a) the convening stage, introduces the mediator to manage the mediation process, provides full disclosure about the dispute mediation process, and allows the mediator and disputants to engage in communication exchange; (b) the opening stage, disputants each introduce themselves with full identifiers, identify by listing the issues they believe are in dispute, and identify by list what they want to get in order to remedy the issue; (c) negotiation stage, the disputants engage in communication exchange concerning and also engage in caucusing activity while communicating ways in which each party would be satisfied while allowing the other party to benefit; (d) closing stage, all issues have been addressed and resolved, and the parties mutually assent to the terms and conditions of the agreement (Moore, 2014; NACM, 2021). A well-conducted dispute mediation exchange is so gratifying the experience is spiritually enlightening, and all parties benefit with emotional well-being, with future improved capabilities to cope with like situations in a more competent manner, and all parties become better people.

Traditional Methods of Dispute Mediation. Dispute mediation as a self-determination theorized mediation resolution process. Dispute mediation processes have been informal and unregulated, with a patchwork of recognized procedures, however, there is increasing structure and order, with governance by state-specific laws in the US, where individual state jurisdictions specify the terms, conditions, and standards for implementation of the self-determination theory of the human motivation process in their states (NACM, 2021). Although by tradition, most governing bodies recognize the arbitration and litigation jurisprudence theoretical approach to the practice of conflict resolution. Modernly, an increasing number of states recognize the additional option of having the self-determination based dispute mediation approach to conflict resolution (NACM, 2021).

The traditional configuration of a dispute mediation consists of two disputants and a neutral dispute mediator. The disputants and mediator will have several meetings in a face-to-face private setting, and work issues out by talking, taking notes, clarifying concerns, and final negotiations (Moore, 2014; NACM, 2021). The traditional dispute mediation processes had predominantly not involved the use of computers or technological innovations. Traditional dispute mediation processes occur in private matters, within organizations, or stemming from court matters such as family court litigation (Moore, 2014; NACM, 2021). New technological innovations are drastically changing the dispute mediation landscape.

Current State of Dispute Mediation. State jurisdictions recognize the addition of the self-determination mediation approach to the practice of conflict resolution, as an option to traditional methods of conflict resolution (NACM, 2021). Jurisdictional governance recognizes the important contributions rendered by the self-determination based dispute mediation process. Additionally, more dispute resolution associations and court systems throughout the nation are

providing education and training regiments that lead to certification of individuals as having completed a structured curriculum, typically 40 hours of education with role-playing (Moore, 2014; NACM, 2021). The formal certification process is becoming more uniform and recognized by private and public entities.

Technological innovation is also having an increasing influence on dispute resolution processes. For example, some companies have developed automated online dispute resolution mechanisms to address consumer customer disputes with the company (Bakhramova, 2022; Ross, 2022). The online innovation is taking many dispute resolution events out of the physical face-to-face environment including virtual reality. Artificial intelligence is another technological innovation that is beginning to influence the field of dispute resolution. For example, artificial intelligence has been introduced to some online dispute resolution platforms, including legal court systems, for dispute resolution events, and helping to sort out claimant issues (Alessa, 2022; Ross, 2022; Zeleznikow, 2021). However, due to the rapid spread of technological innovation, there may be an increase in the use of technological innovation by individual dispute mediator people.

The Linear Analysis Nature of Reactive and Proactive Dispute Mediation

The statistical methods convention, from a variety of SMC protocols, may use linear regression to react to a conflict event. For example, in the case of the Pepperdine model, the likelihood of the disputants arriving at a mutual assented to remedy is determined by the influence of the interactive conceptual constructs occurring during the stages of convening, opening, communicating, negotiating, and closing (Field, 2024; Huang, 2003; NACM, 2021). Linear regression analysis provides a way to explore what contributing elements measurably contribute to the proportionate change to the parties reaching a mutual assent agreement. For

example, during the negotiation phase, does the fact that the parties have the power to agree on disputed issues to resolve the dispute, measure higher and have more significance than the other mediation phases of convening, opening, communicating, and closing.

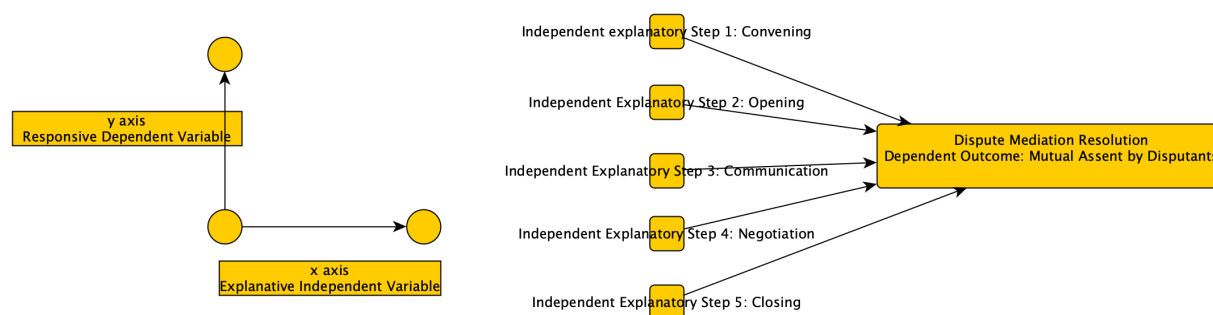
Example 1 - Analysis Applied to: The Dispute Mediation Practice. The statistical methods convention provides for linear analytical protocols, and these can be used by mediators in the practice of self-determination based dispute mediation. Linear analysis protocols relevant to the practice of dispute mediation consist of informational data gathering, informational data analysis and interpretation, and informational data decision-making (Balzer & Schneider, 2021; NACM, 2021). Linear analytical protocols have the capability of assessing known explanatory factors that may actually explain or determine a dispute or alternatively have predictive capabilities to anticipate future disputes based on prior input. Such analysis and interpretation of data help the disputants and dispute mediators to understand the independent explanatory factors that lead to the dispute and enhance the disputants' ability to make informed decisions. The resulting data-based analysis decision-making protocol leads to a fully informed disputant decision-maker while enhancing or satisfying the disputant's self-determination needs of competence, autonomy, and relatedness in the dispute mediation process.

The mediation process requires the mediator to conduct interviews, conversations, and collect documentation at each stage of dispute mediation, continually gathering additional information and conducting dispute statistical analysis. Known statistical data is provided by the disputants at interviews conducted during the pre-convening stage, the convening stage, the communicating stage, the negotiating stage, and the reporting stage, as shown in Figure 12 (NACM, 2021). Such known data is the source of the information concerning the disputants and the issues of the dispute. The known data is used in the analysis procedure. However, the dispute

mediator may also require documentary information to be collected from the disputants in the form of primary or secondary documentation, in order to corroborate assertions made during the interviews.

Figure 12

Illustration of the Linear Analysis Nature of Dispute Mediation: 5-Step Model



Sources: (Author's Own Work; NACM, 2021).

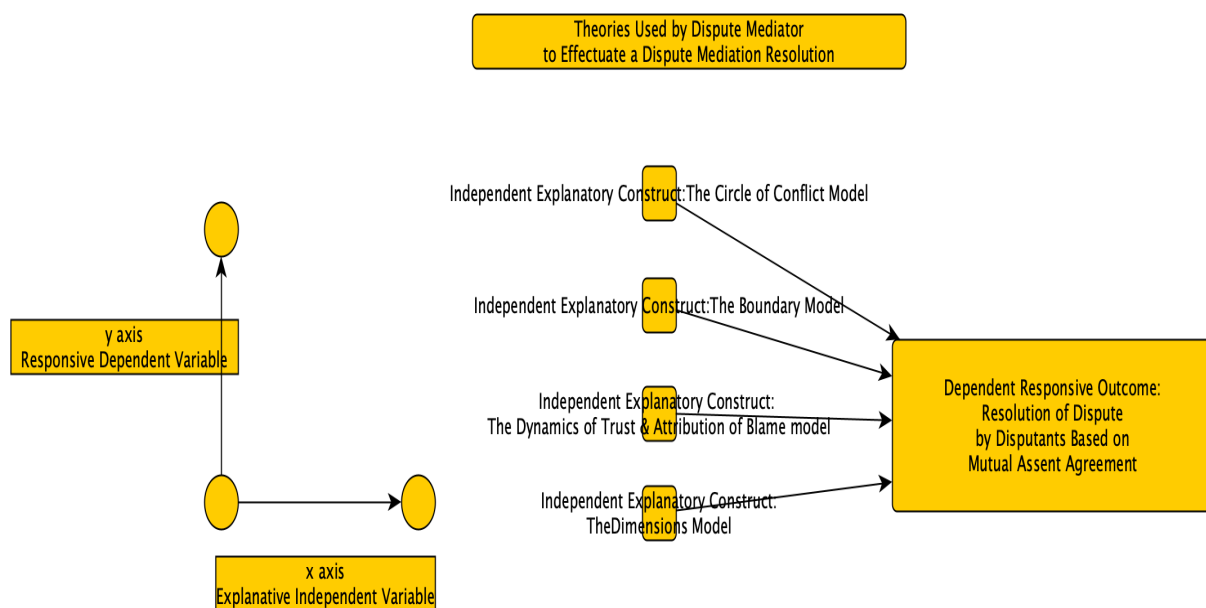
Linear analysis protocols are performed by the dispute mediator during the self-determination based dispute mediation process. During all stages of the dispute mediation process, the dispute analysis procedure is applied, as data obtained from disputant interviews and conversations, are refined and optimized. For example during informational data gathering, relevant data and demographic informational data may be taken from disputants: (a) at the convening stage when initial interviews are taken of each disputant; (b) during the opening stage when disputants meet jointly in a session when joint interviews are conducted; (c) at the communicating stage while disputants are identifying core issues as part of the joint interview; (d) at the negotiating stage while disputants are caucusing, individual interviews are conducted; and (e) at the closing stage during such time disputants are arriving at mutual agreement to resolving the dispute, joint interviews are conducted (see Figure 12). The analysis procedure of data gathering, analyzing, interpreting, and reporting is an iterative procedure done throughout

all stages of mediation (NACM, 2021). The result is fully disclosed information on the issues gotten from disputants, so an informed decision may be made regarding collaboration toward dispute resolution.

Example 2 - Analysis Applied to: The Dispute Mediator's Theoretical Guide. There are a variety of theories that dispute mediators use to effectuate a resolution to a dispute, and the statistical methods convention linear protocols provide statistical information concerning the explanatory factors that contribute to the resolution of a dispute (see Figure 13). For example, (a) *The Circle of Conflict Model*, informs the dispute mediator about six causes that should be considered to resolve a dispute. Those causes include the disputants' values, relationships, attitudes, interests, and communication exchanges; (b) *The Boundary Model*, informs the dispute mediator about the causes that should be considered, such as disagreement concerning boundaries, issues about expanding or breaking boundaries, or refusal to accept authority and jurisdiction belonging to a boundary; (c) *The Dynamics of Trust & Attribution of Blame Model*, informs the dispute mediator about the trust and blame issues that should be considered to resolve a dispute, meaning from a constructive perspective a person giving no blame, has strong trust, from a positive perspective a person giving very low blame, has moderate trust, and from a neutral perspective a person giving low blame, has some trust; and (d) *The Dimensions Model*, informs the dispute mediator to focus on three dimensions to resolve a dispute, as shown in Figure 13 (Furlong, 2010). Those dimensions include the cognitive dimension-how we think about a dispute, the emotional dimension-how we feel about a dispute, and the behavioral dimension-how we act about a dispute.

Figure 13

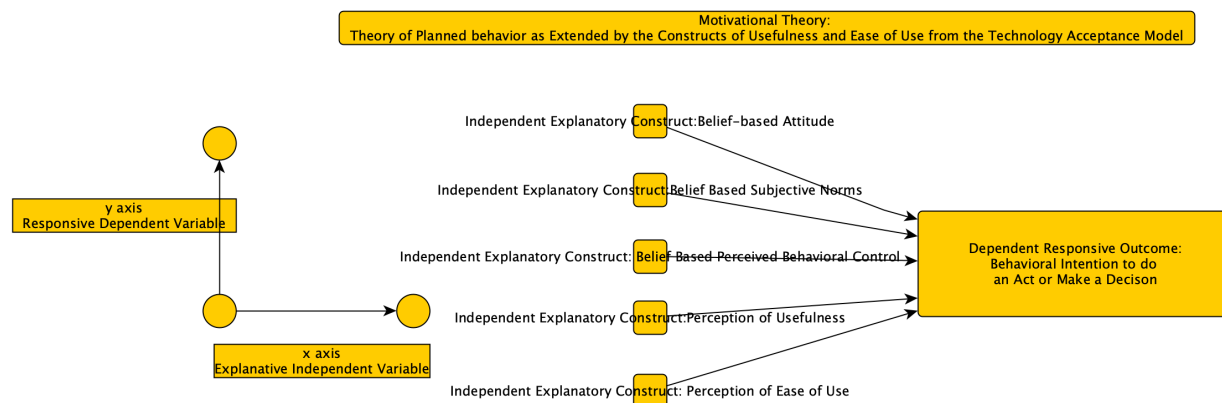
Theories Used by Mediators to Guide Outcomes in Disputants Mutual Agreement



Sources: (Author's Own Work; Furlong, 2010).

Example 3 - Analysis Applied to: The Dispute Mediator's Intention to Use the SMC in the Dispute Mediation Practice. There are a variety of theories that guide an explanation or determination of the behavioral intention of the dispute mediator to use the SMC in the practice of dispute mediation, included are motivational theories such as the expanded theory of planned behavior and the self-determination theory. The statistical methods convention linear protocols may provide statistical information concerning the explanatory factors that contribute to the expanded theory of planned behavior factors such as; belief-based attitudes, belief-based subjective norms, belief-based perceived behavioral controls, perceptions of usefulness, and perceptions of ease of use, as shown in Figure 14 (Davis et al., 1989; Fishbein & Ajzen, 2010). In terms of the self-determination theory, the statistical methods convention linear protocols provide statistical information concerning explanatory factors such as an individual's; competence, autonomy, and relatedness.

Figure 14

The Extended Theory of Planned Behavior

Sources: (Author's Own Work; Davis et al., 1989; Fishbein & Ajzen, 2010).

The statistical methods convention can also be applied proactively through the predictive power of linear regression analysis, for example, the information obtained concerning which variable is more statistically significant to making a decision. That information may be used to predict the future importance of allowing more time to allow disputants to engage in negotiations, as this variable might be most significant towards arriving at a mutually assented to agreement. The Pepperdine dispute mediation model is an illustration of a reactionary statistical methods convention model. The Pepperdine model instructs how to conduct a dispute mediation, by taking the steps of convening, opening, communicating, negotiating, and closing a mediation event (NACM, 2021). The Pepperdine model is used as an intervention implementation method, to react to and remedy current disputes that may arise in an organization. The Pepperdine model is conducive to the application of linear regression and the additional procedures included in the SMC. The Pepperdine model is a model where that can make an estimate about the relationship between (a) independent explanatory abstract constructs, consisting of convening, opening, communication, negotiation, and closing, and (b) dependent responsive consisting of the

construct of the probability of the disputants arriving at mutual assent (NACM, 2021). Within the context of the statistical methods convention, the process of linear regression application concerns the likelihood of the disputants arriving at mutual assent to remedy their disputing differences. This mutual assent may be explained reactively or predicted proactively.

The Statistical Methods Convention

This section describes what the SMC is comprised of and review of the different aspects of the SMC. Additionally, a reverse chronology is presented to further provide an understanding of the SMC. Further, the expansion potential of the SMC is considered, as well as factors that might be involved regarding aversion to the SMC.

What is the Statistical Methods Convention (SMC)?

The SMC is an array of statistical management tools, such as statistical algorithms and software, database sources, and artificial intelligence, used to explain, determine or predict a phenomenon (Lo & Wu, 2005; Wing et al., 2021; Zeleznikow, 2021). Artificial intelligence is gaining traction in various professions. Conventions of statistical methods include artificial intelligence as applied by professionals to make adjustments to transform an individual's self-determination skills into a desirable outcome (Lee et al., 2018; Wagner et al., 2023; Wang et al., 2024). For example, a dispute mediator's self-determination skills may include the artificial intelligence use of *The Pocket Confident*, which allows for individual self-therapy with the guidance of computer interactive technology. A further development of the AI convention includes virtual reality. For example, a dispute mediator's self-determination skills may include the artificial intelligence use of the *Metaverse*, which allows for individual self-therapy with the guidance of a computer AI-driven avatar. In the context of the organizational dispute resolution processes, such as dispute mediation, the statistical methods convention may be used to give a

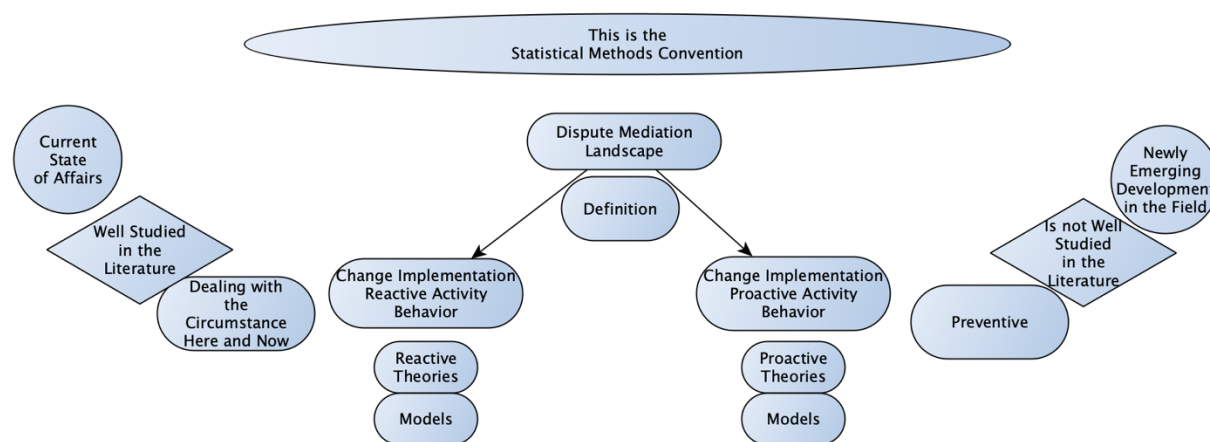
current explanation and determination about an organizational dispute event, or alternatively be predictive and anticipate the possibilities of future organizational disputes occurring, and foreseeing these events and potential outcomes (NACM, 2021; Wing et al., 2021). The SMC's predictive nature provides foresight, which may allow an organization to prevent the escalation and expense of a dispute.

The SMC is commonly referred to as mathematical analytics or data analytics. Such analytics include hypothesis testing, regression analysis, frequency description, frequency comparatives, relationship analysis, and external impact assessments (Ikhsan et al., 2025; Wagner et al., 2023; Wing et al., 2021). By providing the small-scale mathematical linear framework to gather, analyze and interpret data; statistical methods are foundational and facilitate the large-scale artificial intelligence mechanism to obtain information from large volumes of data, leading to improved AI model analysis, interpretation of trends, patterns, relationships, and outcomes of data analyzed (Wagner et al., 2023; Wing et al., 2021). Such analysis contributes to the understanding of intentional behavior considerations brought about by attitudes, norms, controls, usefulness, and ease of use (Ikhsan et al., 2025; Sadriwala & Sadriwala, 2022; Wagner et al., 2023). For example, the statistical methods convention technique of AI's large-scale data analysis plays a decisive role in understanding behavioral intentions. This understanding is garnered by providing insights into large amounts of informational data, which highlights large-scale trends, patterns, and conclusions pertaining to an organizational dispute situation. An SMC technique of artificial intelligence-based Virtual Reality is an example of a statistical mechanism that is immersed in a world of inducing behavioral change, which can be useful in the practice of dispute mediation.

The statistical methods convention provides quantitative and qualitative tools that can be used by dispute mediators while managing reactive or proactive responses. The statistical methods convention offers methods, big data analytics, artificial intelligence, models, and theories to provide current and anticipatory information concerning issues related to organizational disputes (Zelevnikow, 2021). SMC tools are designed to express a phenomenon from an explanatory, determinative, or predictive perspective. A concept map of the statistical methods convention highlights the reactive and the proactive pathways (see Figure 15).

Figure 15

The Statistical Methods Convention Concept Map



Source: (Author's Own Work).

Note. The OlsenPhoenix Concept Map envisions, the traditional reactionary dispute resolution power-forwarding the contemporary proactive dispute resolution protocols.

The reactive pathway illustrates that immediate reaction is required to abate an organizational dispute. For example, tools used for reactive responses may include an implementation intervention theory such as the Pepperdine Model 5-Step Approach to Mediation (NACM, 2021). The mediator may use this model as a procedural guide through the steps of

mediation. On the other hand, the proactive pathway anticipates future dispute events occurring, and proactive response is required to prevent undesirable dispute events from occurring. For example, SMC tools used for proactive responses may include artificial intelligence's big data collection capabilities concerning organizational-workplace conflicts and conflict resolutions (Wing et al., 2021). This may provide information concerning dispute topics and workable dispute resolution techniques for US organizations. The information may allow mediators to anticipate and pre-arrange circumstances to avoid or reduce conflicts from occurring in the first place. As artificial intelligence is a relatively modern developing phenomenon, the proactive behavior of the mediator to use AI may be based on attitude and the influencing effects of others. Concerning the SMC's suggested use of AI and AI analytics in conflict resolution, the mediator's attitude and the influencing effects on others personally and in organizations may drive the mediator's intention to use those statistical techniques. There are several elements that may motivate a mediator to use the SMC, and those elements are fundamental to most decision-making processes. Key elements include attitude, influence effect of others and organizations, usefulness, and ease of use (Jiao & Cao, 2024; Na et al., 2023; Sadriwala & Sadriwala, 2022), which may be a driving force leading to the behavioral intention to use one of the techniques of the statistical methods convention.

Data Analytics: Traditional, Big Data, Artificial Intelligence, and Virtual Reality

Traditionally, the statistical methods convention is used in research methodology, on a small scale, in terms of the number of items being tested. The components of the method apply topical constructs to the guiding framework, collect data information, analyze the data, interpret the data, and provide procedurally set standards, for example, APA standards, to report the information. On the other hand, modernly due to technological innovation, the volume of data

that can be collected has increased exponentially, accounting for obtaining information from an enormously large population of participants, called *big data*.

Modernly, the statistical methods convention is used in research methodology, on a *big data scale*, in terms of the number of items being tested. In big data analysis, the components of the method apply as in the traditional approach to research. However, due to large volumes of data information, computers can acquire such large volumes of data and integrate the information into a framework of artificial intelligence AI, which can be used to be reactive, and make decisions, and make predictions allowing for AI to be proactive in assessment and remedial analysis (Zhang et al., 2023). The statistical methods convention is the foundation for the evolution of the methodology paradigm, including traditional methods, modern big data methods, and artificial intelligence methods. Artificial intelligence computerized interactivity, provides the foundation for the development of a *virtual reality three-dimensional (3-D)* environment, having depth, breadth, and height. The statistical theoretical, data-gathering, analytical, interpretation and reporting components can be expressed by the three spatial dimensions, allowing for 3-D human depth perception observations (Al Qahtani & Alsmairat, 2023). The traditional statistical methods convention is the foundation building block, and other methodological paradigms evolved from including modern big data, artificial intelligence, and virtual reality.

Reverse Chronology: Of the Statistical Methods Convention

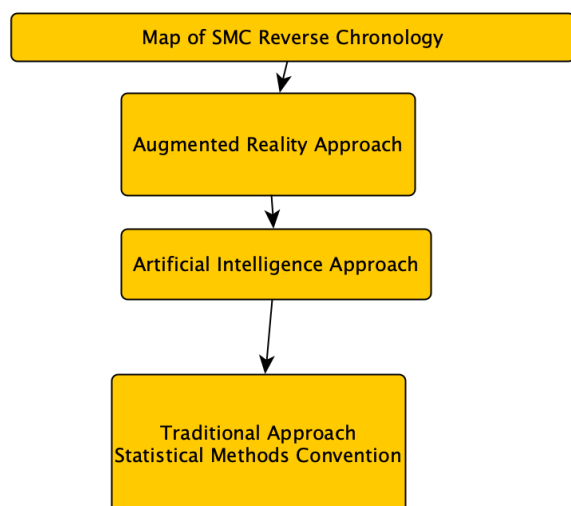
Dispute mediation and the modern artificial intelligence statistical methods convention protocols are both innovations that disrupt the status quo, which are new paradigms that offer a different value or usefulness, that disrupt an existing market, segment, or industry (Bower & Christensen, 1995). Disruptive innovation is the common denominator, the characteristic that is

shared by both the (a) dispute mediation process, and (b) modern artificial intelligence statistical methods convention protocols. The disruptive characteristic of the dispute mediation process is its capability to bring about change by offering to disputants a self-determined theoretical dispute resolution process, which is faster, effective, efficient, and an inexpensive alternative to the traditional litigation resolution system, thereby disrupting the traditional legal litigation system. Examples include: (a) self-determination-based dispute mediation, (b) online, self-determination based dispute mediation; and (c) technology-driven, i.e. metaverse augmented and virtual reality, self-determination based dispute mediation.

The modern statistical methods convention is also a disruptive process. The disruptive characteristic of the modern artificial intelligence statistical methods convention protocols is its capability to empower computerized machines through algorithmic machine language, to analyze data and to perform human tasks (Chaieb et al., 2023). Disruption pushed forward allowing for: (a) computerized machines to *perform complex analytics* with the ability to analyze large volumes of data in order to identify trends, patterns, and relationships; (b) allowing computerized machines to *develop new products and services*, such as PlushCare Virtual doctors, Care-Pods Robotic doctors, online education, training, and skill development programs, and self-driving vehicles (Coccia & Watts, 2020; Hargadon, 2015), (c) allowing computerized machines to improve efficiency by letting them constantly refine and optimize inputted-data. The disruptive mightiness of the modern artificial intelligence statistical methods convention is its power to cause a shift to the Computerized Machine AI evolution, as a development and an expansion of technological innovation.

Dispute mediation is a modern dynamic technological innovation as it disrupts the status quo of legal litigation resolution processes, and offers an alternative process that is self-

determined, more effective, and more efficient than traditional litigation resolution methods. The modern artificial intelligence statistical methods convention protocols are dynamic technological innovations. The combination of both processes, results in a positive additive effect, having the potential of significantly increasing the effectiveness and efficiency of the dispute mediation process. Examples of modern dispute mediation procedures enhanced by the modern artificial intelligence statistical methods convention protocols represented as metaverse augmented reality are as follows: (a) through an online platform, the immersive experience of 3-D Virtual reality communication exchange between disputants distantly located from one another, within an augmented environment designed to provide comfort, safety, and privacy, while hosting is administrated by a dispute mediator covering disputed issues concerning commerce; (b) through an online platform, using mirror world geographical innovative technology to enhance international communication exchange, using the immersive experience of 3-D Virtual reality, within an augmented environment designed to provide comfort, safety, and privacy, while hosting is administrated by a dispute mediator covering disputed issues concerning intellectual property rights; and (c) the new design of a theoretical model to be used for metaverse dispute mediation resolution based on a hybrid legal framework for Metaverse dispute resolution” (Allouzi & Alomari, 2023; Awan et al., 2023; Ryu & Kwak, 2023). Figure 16 displays an overview of the SMC reverse chronology.

Figure 16*Map of SMC Reverse Chronology*

Sources: (Authors Own Work; Mitra, 2023; Wang et al., 2024; Zhou et al., 2024).

The statistical methods convention began from humble beginnings, but in the digital age its application and contribution are important to integrate and communicate the significant integral parts of the human experience. There is a relationship that appears, when populations grow and evolve socially, economically, and politically, which is that the population human experience correspondingly changes to reflect and adopt to that growth and evolutionary impact. The statistical methods convention is a historically time-dated and methodological reflection of evolutionary change. In reverse chronology, currently in the digital era, the evolution of the statistical methods convention represents the statistical theoretical underpinning for Metaverse's Augmented Reality.

The metaverse system, is an example of a statistical methods convention approach of the current digital age. Generally, metaverse is a set of software artificial or human programmed algorithms interfaced to computer hardware mechanisms, which allows individuals to interact with another and the created environment in a 3D special experience (Watanabe & Rule, 2022;

Zhao et al., 2022). Analysis of the metaverse experience helps to explain its functionality and evolutionary development. The metaverse is a relationship that represents the impact component parts have on the target function.

Augmented Reality Sets the Stage Boundaries. Augmented Reality (AR) sets the stage boundary for the metaverse experience. In the metaverse experience, the augmented reality component mission is to target an individual's senses of sight, hearing, touch, smell, pressure, pain, and warmth. To target such senses, the augmented reality component utilizes two mechanisms: (a) software programmed algorithms, and (b) interfaced computer hardware devices including AR glasses, and computer-generated 3-D reality overlay content that are projected onto real-life objects and environments that is viewed by the participant (Mitra, 2023; Tyler Technologies, 2025; Watanabe & Rule, 2022; Zhao et al., 2022). In technological terms, augmented reality is an interactive experience produced when combining the real world with the computer-generated 3-D reality overlay content.

Virtual Reality is About Imitation by way of 3-D. Virtual reality is a component, that works within the boundary set by AR. Virtual reality is the computer-generated imitation of a three-dimensional image, object, or environment that can be interacted with by an individual (Mitra, 2023; Tyler Technologies, 2025). Equipment used with the VR experience includes helmeted screen, and sensory equipped gloves. The virtual reality component is about imitation, its mission is to imitate the appearance of a character. Through use of 3-D lens close to the user's eyes, the user is drawn-in, having an immersed feeling to the virtual world, and thereby promoting a feeling of being part of the virtual world (Mitra, 2023; Tyler Technologies, 2025). The metaverse's augmented reality approach, can differentiate the experience by way of (a) mirror world, and by (b) lifelogging a more specific process.

Mirror world is about Replication. Mirror world is a component, that works within the boundary set by AR. The Mirror world component is about replication of geographical locations, its mission is to replicate real-world environments accurately (Mitra, 2023; Tyler Technologies, 2025; Watanabe & Rule, 2022). With an emphasis on geographical environments, interaction is promoted between individuals from a variety of geographic locations.

Lifelogging is About Digital Diary. Lifelogging is a component, that works within the boundary set by AR. The Lifelogging component is about maintaining a daily diary of events and record those transactions onto a digital device (Mitra, 2023; Tyler Technologies, 2025; Watanabe & Rule, 2022). The digital record will hold a comprehensive catalogue of experiences, interactions, and events, creating an experience audit trail for current review or future predictions.

In terms of application, in the digital era, the SMC's dynamic foundational production of the Metaverse's Augmented Reality has relevant application in the dispute resolution field of professional practice. For example, modernly the eBay and PayPal organizations have pushed forward the development and implementation of the Modria Dispute Resolution system, which is a type of Metaverse Augmented Reality platform. The Modria system allows practitioners to (a) diagnose disputed issues; (b) enable online negotiation between disputants; (c) provide access to a mediator; and (d) refer the case for an evaluation outcome (Tyler Technologies, 2025; Watanabe & Rule, 2022). The tools used in the metaverse dispute mediation exchange include the metaverse's augmented reality use of online real-time technological exchange, virtual reality 3-D visual exchange, mirror world reality to actual geographic location, and use of the lifelogging digital diary, to chronologize issues (Tyler Technologies, 2025; Watanabe & Rule, 2022)). The use of the metaverse's augmented reality tools, give the users the following: (a)

enhanced safety and private space; (b) with a dispute mediator as a dispute mediation process guide; (c) providing an environment for unpressured and private communication exchange; (d) providing an environment for caucusing and deliberation; and (e) providing an environment for resolution finalizing mutual assent between the parties (NACM, 2021; Hodge, 2024). eBay and PayPal have implemented the augmented reality system through-out their organization and have resolved “. . . cases 50% faster than traditional methods” (Tyler Technologies, 2025, p. 2).

The SMC’s dynamic foundational production of Augmented Reality has contributed to the dispute mediation practice in relevant ways. Most notable includes reduction in time to commence and conclude the dispute mediation process, which results in less cost to do the dispute mediation process and less cost to sustain the process, with higher success results in mediation for participants. The SMC’s dynamic foundational production of the Metaverse’s Augmented Reality powers forward technological innovation to the practice of dispute mediation.

Another example, in the domain of law, a dispute mediator hosted an Augmented Reality dispute mediation session with disputants. The augmented reality tools used were virtual reality goggles, which provided the computer-power to 3-D view the exchange within a virtual reality setting, and communicate by using avatars (Watanabe & Rule, 2022). The organization also hosted a Metaverse Augmented Reality-mirror world dispute mediation session, and conducted a mediation session between disputants from different geographical locations using mirror world reality mechanism. Here, again another example of how Augmented Reality pushes forward the practice of dispute mediation. A follow-up example, in the domain of law, discusses the use of augmented reality’s virtual reality section to administrate dispute resolution between disputants. The augmented reality tools used were: (a) online arbitration sessions such as the platform OArb,

or Zoom arbitration; and (b) Tokenized Dispute Mediation, “which allows anonymous users to vote on who they think should win a dispute using digital tokens” (Schmitz, 2023, p. 177). The examples indicate the modern application of the statistical methods convention as advanced through the development of augmented reality, with its components of virtual reality, mirror world reality, and lifelogging reality. The advancement of the metaverse’s augmented reality relies upon the expansion of artificial intelligence.

The reverse chronology continues with the discussion concerning artificial intelligence, which in the current digital era underlies the metaverse’s AR technological mechanisms. Artificial Intelligence, represents the statistical theoretical underpinning for AR. Artificial Intelligence, is another example of a statistical methods convention of the current digital age. Generally, Artificial Intelligence simulates human learning, by way of: (a) software or human programmed algorithms; that (b) interface with computers to enable computer mechanisms to learn, reason, and create performances like humans (Alessa, 2022; Chaieb et al., 2023). Analysis of Artificial Intelligence helps to explain its functionality and evolutionary development, which concerns the relationship between machine adapting to the human element and the human element accepting that adaptation. Artificial Intelligence has relevant application in the dispute resolution field of professional practice. Artificial intelligence can analyze large amounts of data by identifying patterns, trends, descriptions, and quantities, which can provide informational insights to be used in the administration of the mediation process by the dispute mediator (Hodge, 2024).

In terms of the traditional approach, the statistical methods convention is a process used to integrate and communicate the significant trends, patterns, and descriptive quantities of the human experience, while communicating expression of such phenomenological experiences of a

quantitative nature or qualitative nature, through descriptive statistics or inferential statistics. Under the traditional approach, SMC analysis is a two-tier analytical process, the first analytical tier is a descriptive statistics approach, and the second analytical tier is inferential statistics approach. Descriptive statistics concerns (a) the collection of informational data by way of its gathering, vetting and converting processes; (b) analysis and interpretation of informational data by way of descriptive analysis, providing for its reactive responsive capabilities (see Table 4), with a goal to report on the *trends, patterns, and quantities* of discoverable data (Field, 2024; Warner, 2021). Inferential Statistics is a follow-up system to descriptive statistics, and uses quantitative analyzed information to proactively generalize to populations and make predictions concerning future behaviors (Field, 2024; Warner, 2021).

Table 4

Model of Mean, Variance, and Standard Deviation for Normal Data

Descriptive Statistics for Normal Data: Frequency, Average, Variance, and Standard Deviation

Variable	Frequency	Mean	Deviation From the Mean	Squared Deviation From the Mean	Sum of the Squared Deviation From the Mean	Variance Sum of the Squared Deviation From the Mean Divided by N for pop. n-1 for sample	Standard Deviation Sum of the Squared Deviation From the Mean Divided by N or n-1 Take the Square Root
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Sources: (Field, 2024; Gravetter & Wallnau, 2017).

From a traditional approach, descriptive statistics and inferential statistics have relevant application in the dispute resolution field of professional dispute mediation practice. Statistical applications can analyze data by identifying patterns, trends, and descriptions of measurable data quantities. This can provide informational insights to be used in the administration of the

mediation process by the dispute mediator. There are several tools used for the traditional approach. For example, there is a statistical algorithm for the quantitative expression of partial least squares called Smart PLS developed in 2005 by Ringle, Wende, and Becker (Hair et al., 2022). This structural equation modelling application measures trends, patterns, quantities, and relationships between explanatory constructs relationship to another responsive construct in a multi-variate environment (Field, 2024; Hair et al., 2019). Additionally, there is a statistical algorithm for the quantitative expression of covariance-based structural equation modelling, called AMOS developed by IBM. Also, there is an algorithmic expression concerning covariance-based structural equation modelling called STATA. The aforementioned algorithms provide quantitative information concerning the relationships between independent explanatory constructs and dependent responsive constructs. The quantitative outputs from the different algorithms may be similar, but not exactly the same, due to different coefficients used in the algorithmic formula. However, in terms of rigorous checking of informational data; running data through three different algorithmic software applications, would be an additional way *to rigorously vet data* for quantitative integrity, as the outcome results should be approximately similar (Field, 2024; Hair et al., 2019; Warner, 2021).

Expansion Potential of the SMC-DM

Various professional service sectors are beginning to increasingly adopt innovations that include the use of metaverse components of augmented reality-virtual reality-mirror world-lifelogging, artificial intelligence, big data analytics, and statistical analysis. Professional services such as architecture, construction, medical, insurance, legal, and education are demonstrating the usage of statistical methods convention paradigms to assist in accomplishing the processes and outcomes of these professional services (Alsamhan, 2023; Pinsky et al., 2024;

Schmitz, 2023; Zhang et al., 2023). Dispute mediation processes are also beginning to incorporate SMC paradigms to assist dispute mediators or even supplant dispute mediators.

In terms of dispute mediation, SMC paradigms have been arriving in various formats. For example, there are online dispute resolution systems that are incorporating the SMC, such as the systems in use by online consumer services e-bay and PayPal to address customer issues; government court systems are using SMC type platforms to assist litigants in family court matters, traffic matters, and resolving parking tickets; and open source international online dispute resolution platforms that cater to disputants in different parts of the world, using blockchain technology, smart contracts, and cryptocurrencies (Hodge, 2024; Schmitz, 2023; Wing et al., 2021). Development of SMC-founded platforms is in the early stages and appears to be accelerating.

Developers that are shaping new dispute resolution platforms should follow best practices. For example, researchers have found for recommendation of online and AI-supported dispute resolution system building to include important aspects such as consultation with dispute mediators, consideration of ethics, considerations of reliability and validity, recognition of all stakeholders, incorporation of data sharing/database capability, privacy protections, and cyber security measures (Chaieb et al., 2023; Pinsky et al., 2024; Wing et al., 2021). Another emerging issue with the presentation of new platforms is whether they should support the mediator or replace the mediator.

Factors of Aversion to the SMC

There are several factors that contribute to avoiding the use of the statistical methods convention. Those factors cover a broad spectrum, from simply being set in traditional ways, concern that competence gets questioned, fear of being displaced, and to being skeptical of

technological innovations (Juliano & Mamo, 2024; Yildiz Durak & Onan, 2024; Yudhistyra & Srinuan, 2024). Individually and collectively, the factors of aversion to the use of the statistical methods convention provide a variety of reasons why an individual is resistant to change. The modern advancement of technological innovation is advancing at a fast pace and appears to be all-encompassing, and the shear pressure from the force of technological change may create a liability of technological foreignness, which causes a time demand for individuals to wrap their heads around accepting the new technological innovation, by way of education and training.

Within an organizational setting, there are standards in place that benchmark the indicated minimum level of statistical methods convention ability for members of that organization. Members work within that acceptable SMC standard. However, many organizations have adopted modern, fast-paced artificial intelligence and virtual reality technological innovations as an add-on to existing member capabilities. Thus, for members, this addition creates a more competitive internal environment. Membership competing with artificial intelligence and virtual reality, lays the groundwork for fear of incompetency, and fear of being replaced by artificial intelligence and virtual reality (Noroozi et al., 2024). However, recognizing such factors of resistance opens up the opportunity to review motivational intervention techniques to belief-based behaviors, that will promote change and acceptability to the statistical methods convention.

Summary

At the beginning of the literature review, the literature search strategy was presented along with sources used to research the information available for the research study. The researcher dedicated a substantial portion of the literature review to discussing the theoretical framework, including the guiding extended theory of planned behavior model, the origins of the

extended theory of planned behavior model, and a consideration of other potential theoretical models. Additionally, the researcher examined reasons why the chosen extended model was appropriate for the research study, and how it guided the development of the problem, purpose, and research questions. Further, based on the underlying theory and research, a review was provided on the development of the research hypotheses.

Another substantial portion of the literature review was dedicated to describing organizational dispute mediation and the statistical methods convention. In terms of organizational dispute mediation, the researcher provided a definition of self-determination based dispute mediation and explored the importance of organizational dispute mediation. Additionally, the linear analysis nature of reactive and proactive dispute mediation was illustrated with examples. In terms of the statistical methods convention, the researcher described what the statistical methods convention protocols are from traditional methodology to applications for artificial intelligence, and metaverse augmentation. Further, a consideration of the potential for the statistical methods convention for dispute mediators to expand was made, along with factors of aversion to the statistical methods convention.

In terms of the theoretical framework, much of the literature supported the usage of the theory of planned behavior, as well as the extensions of the theory by way of the technology acceptance model. Modern research has also included the use of such extended research models in the areas of data analytics research, artificial intelligence research, and metaverse augmented reality research. The researcher discovered that the literature regarding traditional self-determination based dispute mediation was very consistent and informative. In terms of research on applying the statistical methods convention on dispute mediation, much of the research was positive showing a beneficial relationship. Although the newness of artificial intelligence and

metaverse augmented reality, creates new technological challenges, some research indicates acceptance of these new technological innovations, while other researchers have noted that the new technological innovation will require additional education and training to push forward acceptance.

By way of the literature review process, the researcher discovered many gaps in the academic literature concerning the research topic. Much of the recent research focused on traditional statistical methods convention protocols, however, the futuristic applications of the statistical methods convention protocols in artificial intelligence, metaverse, and augmented reality opens an opportunity for more research. Research regarding the dispute mediator's usage of the statistical methods convention's protocol for artificial intelligence and metaverse augmentation reality in organizational settings was nascent.

In the next section, Chapter Three Research Method, the researcher describes the various components of the research method followed for the research study. The components include the research approach and design, the population and sample, and the development of the survey instrument for informational data collection. Additionally, operationalization of the research constructs is conducted, along with measurement model analysis and structural model analysis. Reliability and validity assessment analysis is conducted. Further, to meet research ethical standards, the ethical assurances is discussed and followed.

Chapter 3: Research Method

In this chapter, the researcher discusses the methodology and research design, along with the population of interest, the research study sample participants, and the survey questionnaire instrumentation that was used for data collection. Also, the researcher provides operational definitions of each research variable in the research model. Study procedures are addressed, as well as an examination of the data analysis strategies. Finally, assumptions, limitations, and delimitations are reviewed, as well as a discussion of ethical assurances.

The problem to be addressed in this study was, that dispute mediators use of the proactive Statistical Methods Convention (SMC) is not widespread, and met with resistance in the dispute mediation process, even though it has been demonstrated that SMC can increase efficiency and provide improvement. The purpose of this quantitative correlational design research was to better understand the dispute mediator's perspective and gain information on predicting the behavioral intentions of dispute mediators regarding the use of the statistical methods convention for dispute mediators by way of the theoretical framework of the theory of planned behavior (TPB) extended by technology acceptance model (TAM) constructs.

Research Methodology and Design

The researcher used a quantitative approach using the correlational plan of research to investigate the relationship between variables that are non-causal, which bring awareness about the dispute mediators' propensity to use the Statistical Methods Convention (SMC). The researcher selected a quantitative approach because the study is theory based, testing of the theory, focused on measuring quantifiable data, assessing relationships, and can be generalized to a population of interest (Varpio et al., 2020).

The qualitative approach provides foundational categorical information for forward moving predictive quantitative analysis computations to occur. Because the TPB is being used to guide the research, the selection of a particular theory may dictate the research approach necessary to use (Varpio et al., 2020). Additionally, here in this research project the hypotheses were developed first, and the researcher is going to collect data to test the hypotheses. Also, based on the nature of the research questions and the researcher's corresponding hypotheses, and that testing of hypotheses is necessary, the quantitative techniques are appropriate for testing of those hypotheses, and to do relational analysis.

The unit of analysis is the individual dispute mediator; therefore, group comparisons are not used. The researcher uses a theoretical model that is an extension of the theory of planned behavior (TPB), which includes the addition of perception of usefulness construct, and perception of ease of use construct. The TPB is chosen because its focal point is on three motivational factors that influence an individual's resulting intention to perform or decide (Ajzen, 1991). The TPB motivational constructs that influence intent and guided the research include: (a) attitude that is formed by positive or negative beliefs concerning a subject; (b) the influence of subjective norm beliefs; and (c) the influence of perceived behavioral control beliefs. The extended TPB was used in order to address the research problem and purpose, as well as answer the research questions. The use of the extended TPB helped explain and make futuristic predictions about the topic under study. By understanding the ideology underlying the three constructs that influence intention, predictions can be made about the likelihood of dispute mediators engaging in the usage of the SMC.

Population and Sample

The researcher is interested in the population of dispute mediators located in the United States who are over 18 years of age. The characteristics of dispute mediators include individuals that practice dispute mediation in organizations, the workplace, government agencies, or dispute mediation resolution associations. The estimated size of the dispute mediator population in the United States is approximately half a million practitioners (Author). There is no one source that provides a grand total for the US. The total population of dispute mediators in the US was arrived at by rough estimates obtained by looking at numbers reported by various governmental, organizational, associations, and private mediation groups from across the US, for an aggregate number (American Arbitration Association, 2024; Bureau of Labor Statistics, 2024; Florida Courts, 2024).

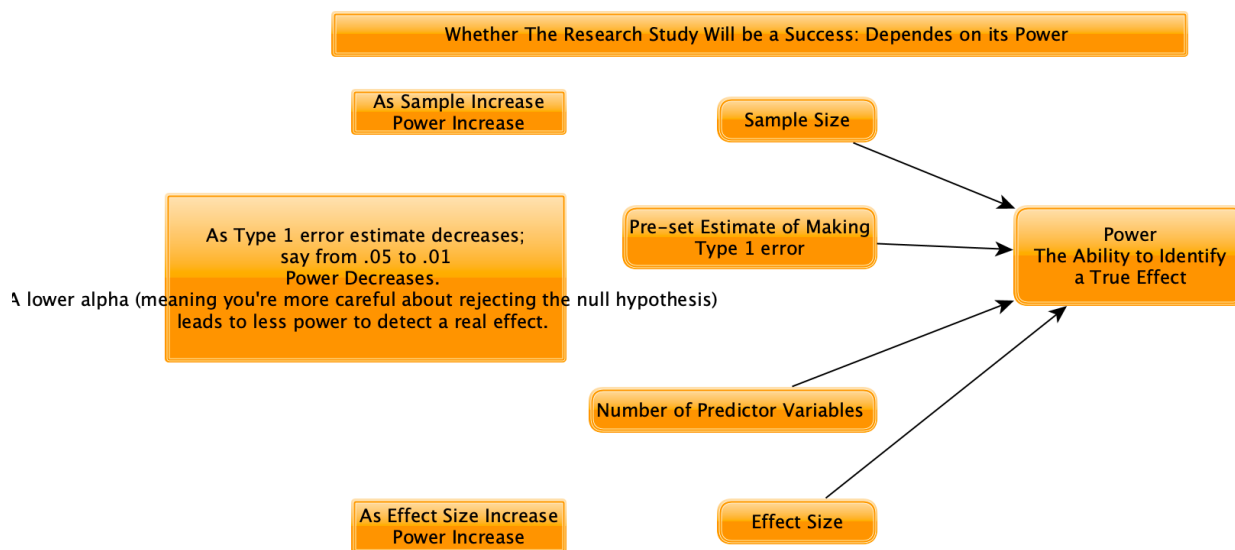
The US population of dispute mediators is the appropriate target group for this research study because this target group is the focal point of the research problem and the research questions. Gathering data from this target group helped answer the research questions and address the research problem, as well as fulfill the requirements of the research purpose. For this research study, a sample was taken from the population of dispute mediators. The sample is intended to have similar characteristics to the US population of dispute mediators. The sample is appropriate because the sample represents the population of interest, and is useful to answer the research questions, address the problem of the study, and fulfill the purposes of the research study.

The researcher used a purposive sample technique. Purposive sampling is a method to obtain information about the population of interest by accessing a smaller sample of people that have the same or similar characteristics of the target population, and meet the requirements of the

research study (Privitera, 2020; Sekaran & Bougie, 2019). The purposive sampling technique allowed the researcher to have a high feasibility of obtaining a representative sample that can provide data that may be generalizable to the population of interest. The researcher performed an *a priori* estimate for the minimum size of the representative sample by way of a power analysis (Faul et al., 2007; Soper, 2024). The power analysis process flow is depicted in Figure 17.

Figure 17

Graphic Flow-Chart for Power Analysis Assessment

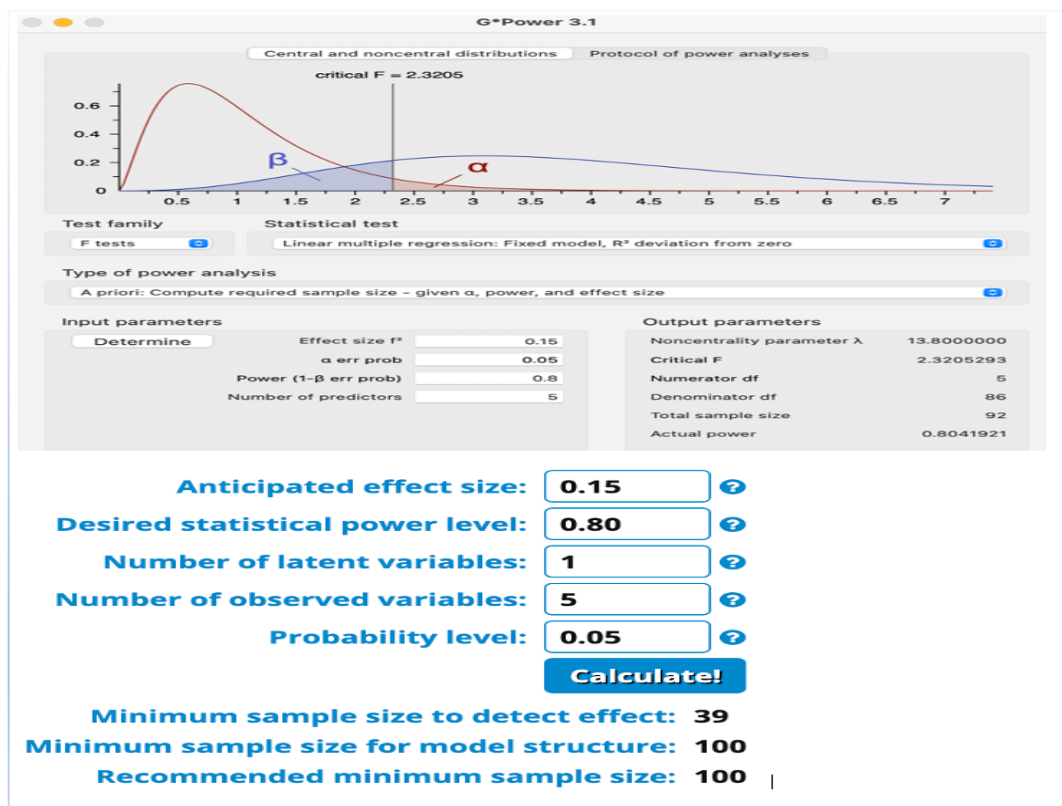


Source: (Author's Own Work, Field, 2024; Gravetter & Wallnau, 2017).

Two different power analysis calculations are made based on an estimated f^2 effect size of 0.15; alpha level .05, and estimated power of 0.80 (see Figure 18).

Figure 18

Graphic Output of Two Power Analysis Computations



Sources: (Faul et al., 2007; Soper, 2024).

The *a priori* estimate for sample size suggests a minimum sample size needed is between 92 and 100 participants. Based on the initial computations, the researcher rounded up to a larger number sample size. To ensure greater accuracy and generalizability, and to account for the possibility of unusable responses, the researcher rounded up to a sample size of 250 (Andrade, 2020; Wolf et al., 2013). The sample size of 250 aligns with SEM general rules of thumb and is feasible for the researcher to attain.

In compliance with National University Institutional Review Board Recruitment Materials, *the researcher* recruited by way of SurveyMonkey recruitment services, and obtained contact permission from the Survey Monkey organization to use their online platform for such

student research activity (National University, 2025). The researcher used Survey Monkey, an independent 3rd party online platform, to recruit participants, who were not directly accessed by the researcher. Survey Monkey is a third-party vendor that provides an online platform interface for student researchers and academicians. Survey Monkey gives permission to student researchers to use its online platform interface. By way of the portal, the researcher did self-service the survey questionnaire, disclosure, and consent documents to the research participants, that partook in Survey Monkey's audience of survey takers nation-wide (Kimball, 2019; Survey Monkey, 2024). The researcher's survey questionnaire contained a *filtering* question to qualify research participants, from the nation-wide audience, to ensure that they had the characteristics of the target population.

Instrumentation

In terms of questions for the survey questionnaire, the TPB constructs were used to design the questions for the survey questionnaire instrument (see Appendix B). The collection of informational data was done by research survey methodology. Survey questionnaires were used to measure the attitude, subjective norm, perceived behavioral control, usefulness, and ease of use variables. The researcher adapted the survey questions from prior research to facilitate sufficient reliability. A summary of the adapted measurement instrument is shown in Table 5.

Table 5*Survey Instrument Development and Reliability*

Research Variables	Measuring Scale	Adapted From Prior Research	Cronbach's Alpha
Intention to use the SMC	Survey Questions Number 16 – 19	(Wang et al., 2024)	.92
Attitude towards use of the SMC	Survey Questions Number 1 – 3	(Gnambs et al., 2025)	.76
Subjective Norms concerning the use of the SMC	Survey Questions Number 4 - 6	(Ngafeeson & Gautam, 2021)	.93
Perceived Behavioral Control regarding use of the SMC	Survey Questions Number 7 - 9	(Ngafeeson & Gautam, 2021)	.81
Perceived Usefulness of the SMC	Survey Questions Number 10 - 12	(Lin et al., 2021)	.89
Perceived Ease of Use of the SMC	Survey Questions Number 13 – 15	(Park, 2009)	.93

The researcher is striving to reach a Cronbach's Alpha of 0.70 or higher for each variable measure. The conversion questions were adapted from prior research, with a reliability (repeated the same or similar) rating of 0.70 or above. The standards for Cronbach's Alpha reliability are: (a) 0.50 poor, (b) 0.60 questionable, (c) 0.70 acceptable, (d) 0.80 good, and (e) 0.90 excellent (Field, 2024; Warner, 2021). Then, an appropriate response format, such as the Likert-type format, was used to account for, accumulate, and contain the numeric data. For example, an answer format for a question would give the respondent the option to use a slider scale to select their level of agreement between strongly disagree and strongly agree (Kankaras & Capecchi, 2024; Lindner & Lindner, 2024). The online survey instrument in this study provided the

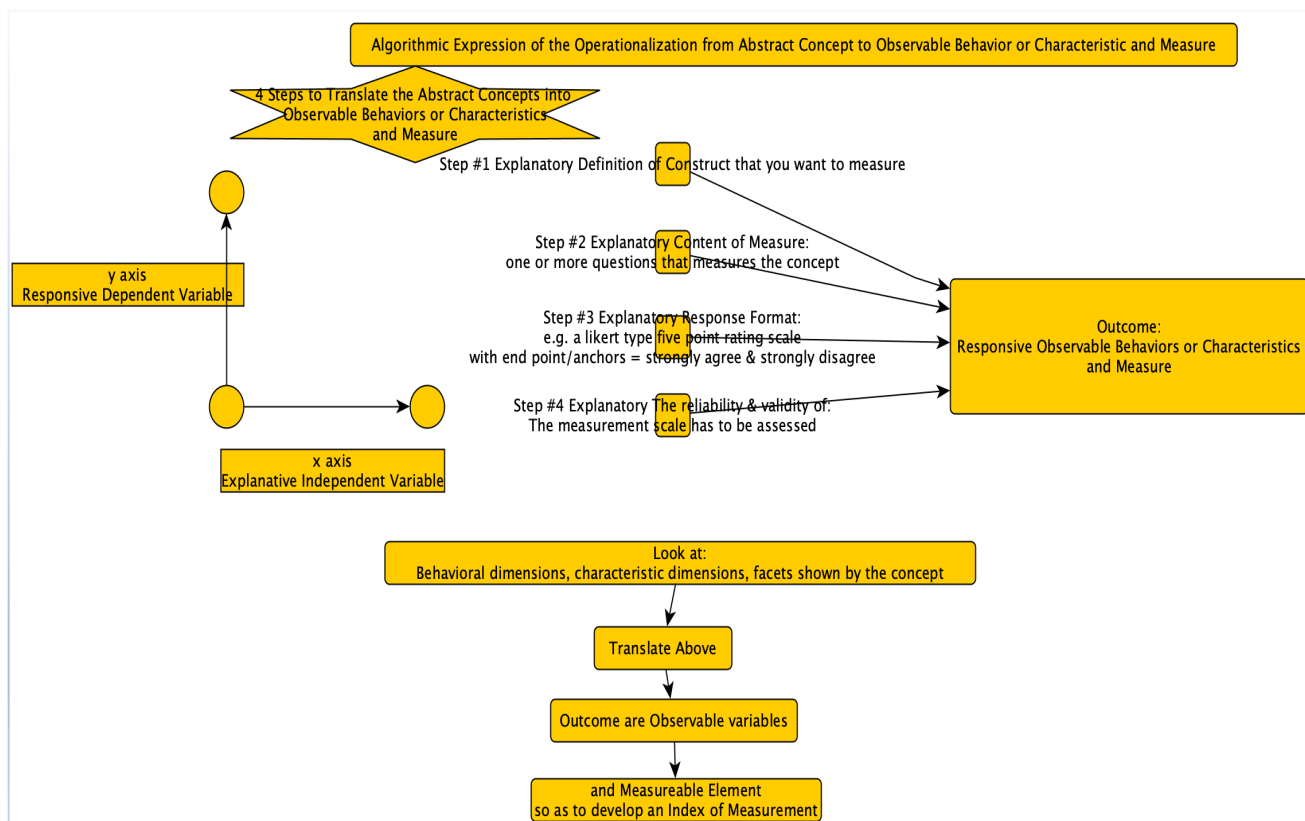
respondent with a slider scale to select between strongly disagree and strongly agree (see Appendix B). These responses corresponded to a numerical value. The values allowed for descriptive, comparative, and relational computations to be made for reporting purposes. The researcher, after data collection and analysis, was able to determine actual validity and reliability. The first checkpoint criterion is validity, asking if the variable reflects the construct it represents. The second checkpoint criterion is reliability, asking if the item produces the same or similar results when repeatedly tested.

Operational Definitions of Variables

Operationalization was done to the extended TPB abstract constructs, converting the constructs into six measurable questionnaire variables. The researcher accomplished operationalization by way of a process to convert the respondents survey answer to a numerical value that can provide an actual quantitative measure of the variable (Field, 2024; Trochim et al., 2016). In terms of variable measures, the numeric value becomes the measurement of the extended TPB variables attitude, subjective norms, perceived behavioral control, usefulness, ease of use, and behavioral intention. Algorithmic rules indicate four steps to be followed when working through the operationalizing of a concept, see Figure 19 for step-wise procedures.

Figure 19

Map of Operationalization Process from Abstract Concept to Measurable Variable



Sources: (Author's own work; Sekaran & Bougie, 2019; Trochim et al., 2016).

A discussion about operationalization must have an outcome focus. In the process of operationalization, the outcomes desired are twofold: (a) to bring about a physically observable behavior or characteristic, and (b) a measure (Sekaran & Bougie, 2019; Trochim et al., 2016). The focus is on the desired outcome. The explanatory indicators bring about the outcomes. Although the number of steps may vary according to a researcher, there are generally four steps, that will explain the procedures to follow to effectuate a conversion from an abstract concept, to an observable behavior or characteristic and measure. Step one is to define the concept; step two is to find an instrument that actually measures the concept; step three is to prepare a response format, e.g., prepare a Likert-type 5-point rating scale with endpoints anchored with strongly

agree and strongly disagree; and step four, the response rating scale has to be assessed for reliability.

As the dependent variable, the outcome response can proportionally be changed. This change can be brought about by changing individually or collectively the measurement dynamics of the explanatory independent variables. These variable arithmetic relationships provide an algorithmic landscape, so concepts of an abstract non-arithmetic nature can be expressed in a quantifiable form. Operationalization achieves to be one of the branches that connect qualitative data to quantitative data and expands the analysis with quantitative empirical data analysis. The definition of the concept provides the elemental road map to the concept that was operationalized. To further illustrate the math conversion protocol computation, see Table 6 below with a computation of the variable attitude towards the use of the SMC towards dispute mediation.

Table 6

Conversion Measurement Protocol

Example of Question for the Variable: Attitude towards the use of the SMC, With Participants Likert type Responses	Participants Scores out of: Possible Range of Scores Low 3 High 15	Computation of Scores
Question: #1 The SMC offers good solutions for many dispute mediation tasks. Response: #1 Answer: (1) strongly disagree, (2) disagree, (3) neither agree or	If participant answered question #1 as agree, Weighted at a value of: 4	Computation means, that there is evidence, as well as a measurement instrument for the variable Attitude towards the SMC.

disagree, (4) agree, and (5) strongly agree.

Question: #2 I have a good feeling when I think about the use of the SMC in daily dispute mediation work

Response: #2 Answer: (1) strongly disagree, (2) disagree, (3) neither agree or disagree, (4) agree, and (5) strongly agree.

If participant answered question #2 as strongly agree, **Weighted at a value of: 5**

Question: #3 If I have to complete an important dispute mediation task, I would prefer to incorporate technology such as the SMC.

Response: #3 Answer: (1) strongly disagree, (2) disagree, (3) neither agree or disagree, (4) agree, and (5) strongly agree.

If participant answered question #3 as agree, **Weighted at a value of: 4**

Total of weighted values = (4+5+4=13), therefore the 13 is nearing the high range of 15, meaning there may be a showing to have a positive attitude towards the SMC. This is the total of scores from the three questions on the attitude measure, providing a composite score of 13.

Sources: (Hair et al., 2022; Kankaras & Capecchi, 2024; Lindner & Lindner, 2024).

For example, the Likert response format could provide a value of 5 for highly agree, 4 for agree, 3 for neither agree or disagree, 2 for disagree, and 1 for highly disagree. Each of the research variables had multiple questions with the Likert response format, providing quantitative values for that variable based on each of the participant's responses. An example of Likert response processing is: (a) 3 survey questions for attitude with a Likert type format response 1-5; (b) respondent answer a 1 on all 3 questions, a sum score of 3; (c) respondent answers a 5 on all 3 questions, a sum score of 15; (d) the range of scores that could exist is between 3 and 15. If a respondent answers with a score of 13 as illustrated, there is evidence that participant has a very positive attitude about the use of the SMC. Each of the extended TPB variables were

operationalized in a similar manner. In the SmartPLS structural equation modeling software, the computation of variable scores was done with additional accuracy by way of the software algorithm, which also included computation of measurement error (Hair et al., 2022). The increased accuracy provides the researcher greater useability of the measurements.

Intention to use the SMC for Dispute Mediation

The intention variable originates as a construct from theory. Fishbein and Ajzen (2010), on the theory of planned behavior (TPB), describe behavioral intention as the person's desire or want to do an act or behavior. In this study, the focus was on the individual's intention to use the SMC for dispute mediation, which means do they have a desire or want to use the SMC in the practice of mediation. The source of data to measure this variable came from the online survey instrument developed for this research study. The role of this variable was the responsive outcome variable of interest, which is predicted upon by five other variables in the research model. The measurement of the intention variable was accomplished by survey questions numbered 16 – 19 (see Table 5 and Appendix B). The score from the answer to the survey question was by way of a Likert scale format, where an answer of strongly disagree equals 1, disagree equals 2, neither disagree or agree equals 3, agree equals 4, and strongly agree equals 5 (Kankaras & Capecchi, 2024; Lindner & Lindner, 2024). The scores from the individual survey questions for the variable are added up for a composite score. Each of the scores on the variable was weighted by the Smart-PLS statistical software and then formed into a composite measure as a proxy of the variable (Hair et al., 2022; see Table 6). The software variable measurement procedures were similar for all of the research variables.

Attitude Towards the use of the SMC

To operationalize the attitude concept, which comes from the TBP, a measurement would have to be made of the dispute mediator's attitude. A measurement can be done by assigning numbers to concepts that have been translated into observable behaviors or characteristics. For example, the concept of the dispute mediator's attitude towards the intention to use the SMC is abstract. However, it could be anticipated that a favorable attitude about the SMC might be demonstrated by; a mediator that expresses a good feeling about utilizing the SMC in practice; expressing a preference to use the SMC in mediation work; and having an opinion that the SMC could be a good solution for dispute mediation tasks. The source of data to measure this variable came from the online survey instrument developed for this research study.

The role of this variable is an explanatory variable, which predicted upon the intention variable. The measurement of the attitude variable was accomplished by survey questions numbered 1 – 3 (see Table 5 and Appendix B). The score from the answer to the survey question is by way of a Likert scale format, where an answer of strongly disagree equals 1, disagree equals 2, neither disagree or agree equals 3, agree equals 4, and strongly agree equals 5 (Kankaras & Capecchi, 2024; Lindner & Lindner, 2024). The scores from the individual survey questions for the variable are added up for a composite score. Each of the scores on the variable were weighted by the Smart-PLS statistical software and then formed into a composite measure as a proxy of the variable (Hair et al., 2022; see Table 6). The measures are used for further analysis within the research model.

Subjective Norms Concerning the Use of the SMC

The subjective norms variable concerns the concept of whether subjective norms have an influence on the dispute mediator's behavior to use the statistical methods convention in the

practice of dispute mediation. Subjective norms assessment investigates whether significant others, family, and friends influence the individual (Fishbein & Ajzen, 2010). In this study, the mediator's perceived subjective norms concerning the decisions about the use of the statistical methods convention in the practice of dispute mediation is a variable of interest.

For example, the concept of the dispute mediator's subjective norms toward the intention to use the SMC is abstract. However, it could be anticipated that favorable subjective norms to use the SMC might be demonstrated by significant others, friends, and family by encouraging the mediator to utilize the SMC in practice regularly e.g., family may pay for computers, or seminars to encourage the use of the statistical methods convention. The anticipated reaction of subjective norms is the encouragement to use the SMC in practice, and this can be measurably shown, e.g., by encouraging or paying for computers, or seminars for SMC skill upgrades.

The role of this variable is an explanatory variable, which predicted upon the intention variable. The measurement of the attitude variable was accomplished by survey questions numbered 4 – 6 (see Table 5 and Appendix B). The score from the answer to the survey question is by way of a Likert scale format, where an answer of strongly disagree equals 1, disagree equals 2, neither disagree or agree equals 3, agree equals 4, and strongly agree equals 5 (Kankaras & Capecchi, 2024; Lindner & Lindner, 2024). The scores from the individual survey questions for the variable are added up for a composite score. Each of the scores on the variable were weighted by the Smart-PLS statistical software and then formed into a composite measure as a proxy of the variable (Hair et al., 2022; see Table 6). The measure was used for further analysis within the research model.

Perceived Behavioral Control Regarding the Use of the SMC

The perceived behavioral control variable concerns the abstract concept of control as an individual's belief about their ability, opportunities, and resources to engage or accomplish a given behavior (Fishbein & Ajzen, 2010). The concept proposes that the more ability, opportunity, and resources an individual has over a behavior, the more likely the individual will commit to the intention of doing the behavior. For example, the concept of the dispute mediator's perceived behavioral control is the mediator's belief in their ability, opportunity, and resources to be able to use the statistical methods convention in dispute mediation (Fishbein & Ajzen, 2010; Lee et al., 2018). However, it could be anticipated that favorable perceived behavioral control to use the SMC might be demonstrated by the mediator to utilize the SMC by getting education, training, or skill upgrades of the statistical methods convention. The anticipated reaction of perceived behavioral control is the preparedness to use the SMC in practice, and this can be measurably shown, e.g., by accounting for the education, training, or SMC skill upgrades to use the SMC.

The role of this variable is an explanatory variable, which predicted upon the intention variable. The measurement of the perceived behavioral control variable was accomplished by survey questions numbered 7 – 9 (see Table 5 and Appendix B). The score from the answer to the survey question is by way of a Likert scale format, where an answer of strongly disagree equals 1, disagree equals 2, neither disagree or agree equals 3, agree equals 4, and strongly agree equals 5 (Kankaras & Capecchi, 2024; Lindner & Lindner, 2024). The scores from the individual survey questions for the variable are added up for a composite score. Each of the scores on the variable were weighted by the Smart-PLS statistical software and then formed into a composite

measure as a proxy of the variable (Hair et al., 2022; see Table 6). The measure is used for further analysis within the research model.

Perceived Usefulness of the SMC

Perceived usefulness concerns the abstract concept involving an individual's belief about how enhancing or helpful a technology can be for the individual. The concept proposes that the more enhancing or helpful a technological innovation is, the more likely the individual will commit to the intention of using the technological innovation (Davis et al., 1989). In this study, the example is the concept of the dispute mediator's beliefs concerning the enhancement capabilities or the helpfulness capabilities of a given statistical methods convention. However, it could be anticipated that favorable perceived usefulness to use the SMC might be demonstrated by the mediator to utilize the SMC by putting to use statistical methods convention mechanisms, and protocols. The anticipated reaction of perceived usefulness is the usage of the SMC in practice, and this can be measurably shown, e.g., by accounting for the statistical methods convention dispute mediation models used in the practice of dispute mediation.

The role of this variable is an explanatory variable, which predicted upon the intention variable. The measurement of the perceived usefulness variable was accomplished by survey questions numbered 10 – 12 (see Table 5 and Appendix B). The score from the answer to the survey question is by way of a Likert scale format, where an answer of strongly disagree equals 1, disagree equals 2, neither disagree or agree equals 3, agree equals 4, and strongly agree equals 5 (Kankaras & Capecchi, 2024; Lindner & Lindner, 2024). The scores from the individual survey questions for the variable are added up for a composite score. Each of the scores on the variable were weighted by the Smart-PLS statistical software and then formed into a composite

measure as a proxy of the variable (Hair et al., 2022; see Table 6). The measure was used for further analysis within the research model.

Perceived Ease of Use of the SMC

The abstract concept of perceived ease of use is an individual's belief about how easy or difficult using a technological innovation will be, in deciding to commit to behavioral intention. The concept proposes that the more easily a technological innovation is, the more likely the individual will commit to the intention of using the technological innovation (Davis et al., 1989). For example, the concept of the dispute mediator's perceived ease of use is the mediator's belief in the easiness of using a statistical methods convention. However, it could be anticipated that favorable perceived ease of use of the SMC might be demonstrated by the mediator to utilize the SMC by putting to use statistical methods convention mechanisms, and protocols. The anticipated reaction of perceived ease of use is the usage of the SMC in practice, and this can be measurably shown, e.g., by accounting for the statistical methods convention dispute mediation models used in the practice of dispute mediation.

The role of this variable is an explanatory variable, which predicted upon the attitude and perceived usefulness variables. The measurement of the attitude variable was accomplished by survey questions numbered 13 – 15 (see Table 5 and Appendix B). The score from the answer to the survey question is by way of a Likert scale format, where an answer of strongly disagree equals 1, disagree equals 2, neither disagree or agree equals 3, agree equals 4, and strongly agree equals 5 (Kankaras & Capecchi, 2024; Lindner & Lindner, 2024). The scores from the individual survey questions for the variable are added up for a composite score. Each of the scores on the variable were weighted by the Smart-PLS statistical software and then formed into a composite

measure as a proxy of the variable (Hair et al., 2022; see Table 6). The measures were used for further analysis within the research model.

Study Procedures

The pathway of data reasonableness assessment begins with the development of the online survey instrument, recruitment of survey participants, then data collection by way of the online survey instrument, and were intersected by steps of data analysis methodology. Those analytical steps are sequentially ordered, highlighting the important procedures to follow, so other researchers may replicate the research process. After data cleaning, further statistical analysis was made to ensure procedural assumptions have been met.

The pathway of data reasonableness assessment included the identity of the variables that were measured for this study. Those variables include belief-based attitude, subjective norms, perceived behavioral control, perceptions of usefulness, and perceptions of ease of use. Additionally, the pathway included the identity of the units of measure, which in the case of the current study are individual dispute mediators. Those adult dispute mediators practice in the United States. The sample size estimate was calculated by the SEM software Soper calculator, which indicated a sample size of 138 individuals. The researcher collected the data for the study by way of a 19-question survey questionnaire instrument. The survey was administered online by way of the Survey Monkey Internet platform. The survey questions provided the measurement data for each hypothesis test. The survey participants are accessed by way of the Survey Monkey online survey participant pools. The survey participants were to pre-qualify to access the survey by indicating that they were a dispute mediator, and if they were not a dispute mediator, they did not qualify for the survey. Further, the pathway explained:

1. Data gathering and protection procedures;

2. Data cleaning procedures;
3. Missing data procedure: Eliminate cases that do not include all 19 responses;
4. Linearity and normality analytics using scatterplots for linearity and for normality, frequency-distributions, histograms, and *P-P* plots to review skewness and kurtosis;
5. Bootstrap confidence interval analysis;
6. Produce descriptive statistics analytics, and graphically produce each variable with mean, standard deviation, range, and min. score and max score;
7. Produce bivariate statistics analytics, by assessing relationships using the Pearson correlation coefficient, reporting sequence to use is as follows: hypothesis, two-tail test, number of samples, alpha significance level, coefficient, p-value, percentage confidence interval, and effect size and correlational plots; and
8. Produce multivariate statistical analytics with discussion;
9. Produce measurement model evaluation with discussions about convergent and discriminant validity; and
10. Produce reliability assessments.

Data Analysis

The purpose of this research project is to examine the elemental variables of the extended theory of planned behavior (TPB), which may have an influence on the behavioral intention to use the statistical methods convention in the practice of dispute mediation. The participant's responses to survey questions provided indication about which variables in the research model influence the most and to what degree. The numeric values of the variables: attitude, subjective norms, perceived behavioral control, usefulness, ease of use, and behavioral intention provided

evidence of the intention to use. In terms of answers to the survey questionnaire, the participant survey answers were used for variable capture, accumulation, and accountability measurements.

What was done with the raw data included several procedures. While using statistics to analyze the information, statistic standards require fundamental assumptions to be identified and met for a particular process, and here regression process assumptions to be initially considered are linearity, additivity, normality, homogeneity, and independence. The data analysis did follow six procedural steps which are summarized in Table 7.

Table 7

Data Analysis Procedure Steps

Data Analysis Procedure Steps	Actions for Data Analysis
First Step	<p>Screening the data for:</p> <ul style="list-style-type: none"> • Irregularities or incomplete responses • Non-relevant responses • Missing data • Linearity
Second Step	<p>Assess data for normality or non-normality:</p> <ul style="list-style-type: none"> • Determine the test to use such as the Pearson for normal data. • If there are exceptions to normality, then alternative statistical techniques may be used to analyze non-normal data information • Apply bootstrap confidence techniques for robustness
Third Step	<p>Compute Descriptive statistics:</p> <ul style="list-style-type: none"> • Analyze the characteristics of the research data • Commencement of univariate descriptive frequency analysis includes recognizing mean average for normal data, standard deviations, and ranges
Fourth Step	<p>Measurement model analysis:</p> <ul style="list-style-type: none"> • SmartPLS software will assess the factor loadings of the values from the survey answers on the research variables to make sure the measurements are reliable
Fifth Step	<p>Bivariate analysis:</p> <ul style="list-style-type: none"> • Test the relationships between the predictor and outcome variables, and analyze each relationship that corresponds to each research question
Sixth Step	<p>Multivariate analysis:</p> <p>Test all the variables in the model, including mediators, using Smart PLS structural equation modelling software.</p>

Sources: (Gravetter & Wallnau, 2017; Hair et al., 2022; Warner, 2021).

In terms of data analysis plan step five bivariate analysis and step six multivariate analysis, Tables 8 and 9 provide a summary to describe variable roles, level of measurement, and statistical testing to be done.

Table 8

Summary of Bivariate Analysis

<i>H#</i>	Predictor Variable (LoM)	Outcome Variable (LoM)	Statistical Test
<i>H1</i>	Attitude (Interval)	INT (Interval)	Pearson Correlation (Field, 2024; Warner, 2021)
<i>H2</i>	Subjective Norms (Interval)	INT (Interval)	Pearson Correlation (Field, 2024; Warner, 2021)
<i>H3</i>	Perceived Control (Interval)	INT (Interval)	Pearson Correlation (Field, 2024; Warner, 2021)
<i>H4</i>	Perceived Usefulness (Interval)	INT (Interval)	Pearson Correlation (Field, 2024; Warner, 2021)
<i>H5</i>	Perceived Ease of Use (Interval)	INT (Interval)	Pearson Correlation (Field, 2024; Warner, 2021)

Note. *H#* = hypothesis number, LoM = level of measurement, INT = Intention.

Table 9

Summary of Multivariate Analysis

<i>H#</i>	Predictor Variable + Mediator	Outcome Variable	Statistical Test
<i>H1</i>	Attitude	Intention	Multiple Regression (Hair et al., 2022; Warner, 2021)
<i>H2</i>	Subjective Norms	Intention	Multiple Regression (Hair et al., 2022; Warner, 2021)
<i>H3</i>	Perceived Control	Intention	Multiple Regression (Hair et al., 2022; Warner, 2021)

<i>H4</i>	Perceived Usefulness	Intention	Multiple Regression (Hair et al., 2022; Warner, 2021)
<i>H5</i>	Perceived Ease of Use	Intention	Multiple Regression (Hair et al., 2022; Warner, 2021)
<i>H6</i>	Perceived Usefulness + Attitude	Intention	Mediation Analysis (Baron & Kenny, 1986; Davis et al., 1989; Hair et al., 2022)
<i>H7</i>	Perceived Ease of Use + Perceived Usefulness	Attitude	Mediation Analysis (Baron & Kenny, 1986; Davis et al., 1989; Hair et al., 2022)

Note. *H#* = hypothesis number.

These procedures will advance the ability to evaluate the potential of the extended TPB research model. The evaluation will determine if the TPB structural model constructs have predictive capability to measure the behavioral intention to use the SMC. This will indicate if the research model is useful, meaning will it help to understand the dispute mediator's intention for using the statistical methods convention.

Assumptions

There were many assumptions made while conducting this research project. Most importantly, the researcher assumed that the research topic is still relevant, and there is still a need for the research to be done by the academic community. Also, it was assumed that private and public organizations will benefit from the informational outcome of the research.

Additionally, it was assumed that the current research project concerning the subject of The Intentions of Dispute Mediators to use the Statistical Methods Convention, will be expanded upon by other researchers in the future.

In terms of research participants, it was assumed that the participants had a minimal understanding of the statistical methods convention for dispute mediators, and that they would answer the research questionnaires honestly and factually based. Additionally, it was assumed that the participants would make the appropriate effort to complete the survey questionnaire. Also, it was assumed that the participants would provide meaningful answers to the survey questions. Another assumption was that the dispute mediator participants would be basically familiar with the concepts of computer technology and the use of online platforms that are artificial intelligence enabled. Also, it was assumed that the participants understood the concept of an online artificial intelligence enabled platform, which could assist a dispute mediator in the mediation process. It was assumed that participants use procedural models when conducting mediation practice. Further it was assumed that participants believed that disputes are reconcilable, thereby making mediation the appropriate choice for a dispute resolution forum.

In terms of reasonableness assessment, the ultimate goal is to find the statistical power of the research that is: (a) that the researcher's hypothesis is true, that there is a relationship between the dispute mediator's intention to use SMC, and the dispute mediator's belief-based attitude, towards the SMC; when (b) according to evidence collected, says it is true that there is such a relationship. In this current study concerning dispute mediator's intention to use the SMC statistical power was estimated at eighty percent (.80), while on the other hand allowing a twenty percent (.20) possibility of making a mistaken error. Reasonableness assessing assumptions regarding statistical power analysis have an impact on the accuracy of the study (Privitera, 2020; Trochim et al., 2016).

However, there is a situation that can change the ultimate goal of statistical power for better or for worse, and that is when there is a mistaken error. There is a situation where (a) the

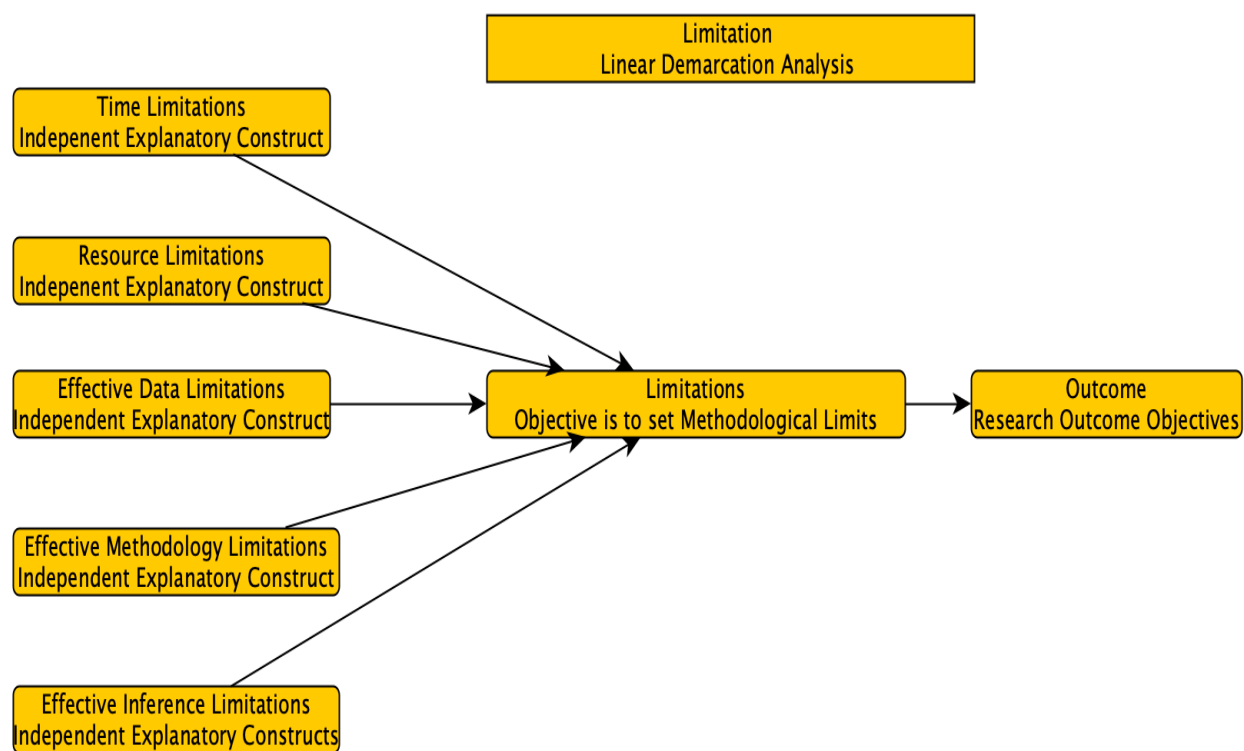
researcher's hypothesis can state that there is a relationship; and (b) according to the evidence collected, there is no relationship (Privitera, 2020; Trochim et al., 2016). In this current study concerning dispute mediator's intentions, the alpha probability was estimated at five percent (.05) of making a mistaken error, while on the other hand setting a ninety five percent (.95) significance level and interval. But, note that the consequence of this mistaken error results in a very substantial way and causes a conflicting challenge to the ultimate power of the research study, and thus may diminish the probability of the power estimate. Another mistaken error that is not so substantial, and to a lesser degree causes a conflicting challenge to the ultimate power of the research study, is when the researcher's mistaken error hypothesis supports the consistency of an already established null hypothesis that is in error. Reasonableness assessment as applied to the statistical power analysis is crucial to the research methodology and places many boundaries on the researcher's data assessment efforts.

A discussion on the topic of assumptions by way of using the Scope, Applicability, and Validity (SAP) approach provides a reasonableness assessment analysis, which focuses on two generalization concepts of being able to generalize to an external population, place and time and (b) generalization to specific constructs, with acceptable accuracy-risk measurement internal and conclusion protocols utilized (Gravetter & Wallnau, 2017; Trochim et al., 2016). This top-down analysis approach determined the level and amount of accuracy versus risk protocols required for this research project. For example, if the research project is generalized to extended to global populations, then internal and conclusion protocols would require a two-tail test, a large sample size, and a large effect size, risking a little precision on the alpha significance, say from .05 to .10 and a confidence level from .95 to .90. Meaning as you generalize to larger and larger populations, there will be a compromise, rendering a reduction in data precision accounting. On

the other hand, if the research project is generalized to a small population, then internal and conclusion protocols would require an option of one or two tail tests, a small sample size, and an effect size that provides recognized precision on the alpha significance .05 with an interval of .95. Meaning as you generalize to a small population, there will be a reasonable compromise, rendering an acceptable balance in data precision accounting. In reasonable assessment analysis, there is a balancing requirement between statistical power and statistical precision.

Limitations

Limitation is a branch of research methods knowledge for the research community. The limitations section in research methodology provides information about research factor constraints, but beyond those constraints may be subject areas that need future research. Constraint factors identified in the limitation section become part of the substantive contextual transparency framework of the research project, such disclosures are most important in all research projects. Limitations are external factor constraints or weaknesses that change by degree and direction; the scope, validity, and applicability of the research outcomes are as follows: time, resources, data, methods, and inference limitations. Some of these external factors are not within the control of the researcher, while other factors are within the researcher's control. These factors that are not within the researcher's control may have a limiting effect on the production of the research project. External factors not within the researcher's control may assert time limitations, resource limitations, and effective data limitations. External factors within the researcher's control that may assert limitations are method limitations and inference limitations. Limitations are depicted graphically in Figure 20.

Figure 20*Linear Limitation Analysis*

Sources: (Author's Own Work; Trochim et al., 2016).

Time Limitations

Example, the time goal of the current dissertation research project was two months, asserting an external limitation on time to finish the research project within a two month period, which limited the scope and applicability of the research outcome.

Resource Limitations

For example, the budget goal of the current dissertation research project was a stated number of dollars, asserting an external limitation on research budget cost to fall within that amount. Here the budgeted cost to take sample surveys was one thousand five hundred dollars, the amount asserts an external limitation on the cost to finish the research project, which limited the scope and applicability of the research outcome.

Effective Data Limitations

Example, the effectiveness of data goals of the current dissertation included valid data gathering procedures, and appropriate data cleaning procedures, and these factors asserted an external limitation, which limited the validity of the research outcome.

Effective Methodology Limitations

Example, the effectiveness of research method goals of the current dissertation consisted of the research design factor, sample size factor, and measurement instrument factor. These factors asserted an external limitation, which limited the scope, validity, and applicability of the research outcome.

Effective inference limitations

Example, the effectiveness of generalization factor goals in the current dissertation consisted of the extent to which an outcome can be generalized to another population, time, and place. The extent of the generalization factor asserted an external limitation, which limited the scope, and applicability of the research outcome.

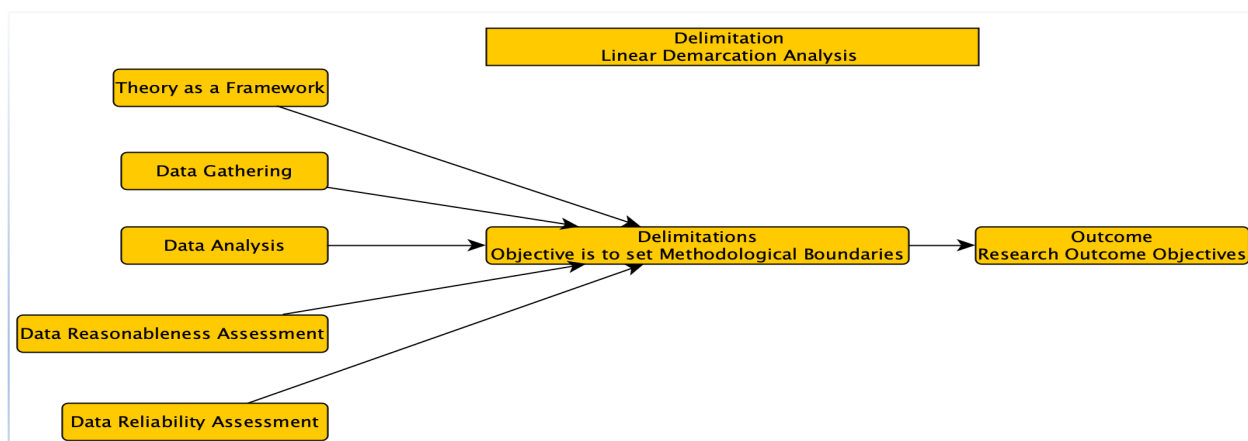
Delimitations

Research boundary setting or delimitation is a process of linear demarcation, as applied to research methodology. The researcher sets the prescription on the delimitation of research methodology, which are instructions written by the researcher that indicate, for a research project, the topical unique research methodology to be utilized for a given project (Creswell & Creswell, 2022). Research methodology is a systematic approach that uses independent explanatory techniques to achieve the research project's outcome objectives, such as answers to the research questions of the particular project. *Theory as a Framework*: In this scientific quantitative research approach, the design of the research project is demarcated by theories,

frameworks, and models, for organized guidance. *Data Collection*: Within the theoretical framework and model, research methodology indicates the relevant methods to be used to gather information data, for example in the current research project survey questionnaires will be used (Creswell & Creswell, 2022). *Data Analysis*: After obtaining relevant informational data, the methodology indicates the techniques to be used to analyze the collected data, for example in the current project statistical Structural Equation Modelling was used to analyze the informational data. *Data Reasonableness Assessment*: After data analysis, reasonableness assessment, allows the researcher to demonstrate the reasonableness of asserted alternative hypotheses, which supports or challenges the status-quo hypothetical assertions. *Data Reliability Assessment*: After reasonableness assessment, reliability testing of statistical outcomes is conducted, this is done to ensure the likelihood of similar outcomes should other researchers test the results. Delimitation or setting the boundaries for research methodology, sets a linear demarcation and identifies the independent explanatory elements that achieve the outcome objectives of the research (see Figure 21).

Figure 21

Linear Delimitation Analysis



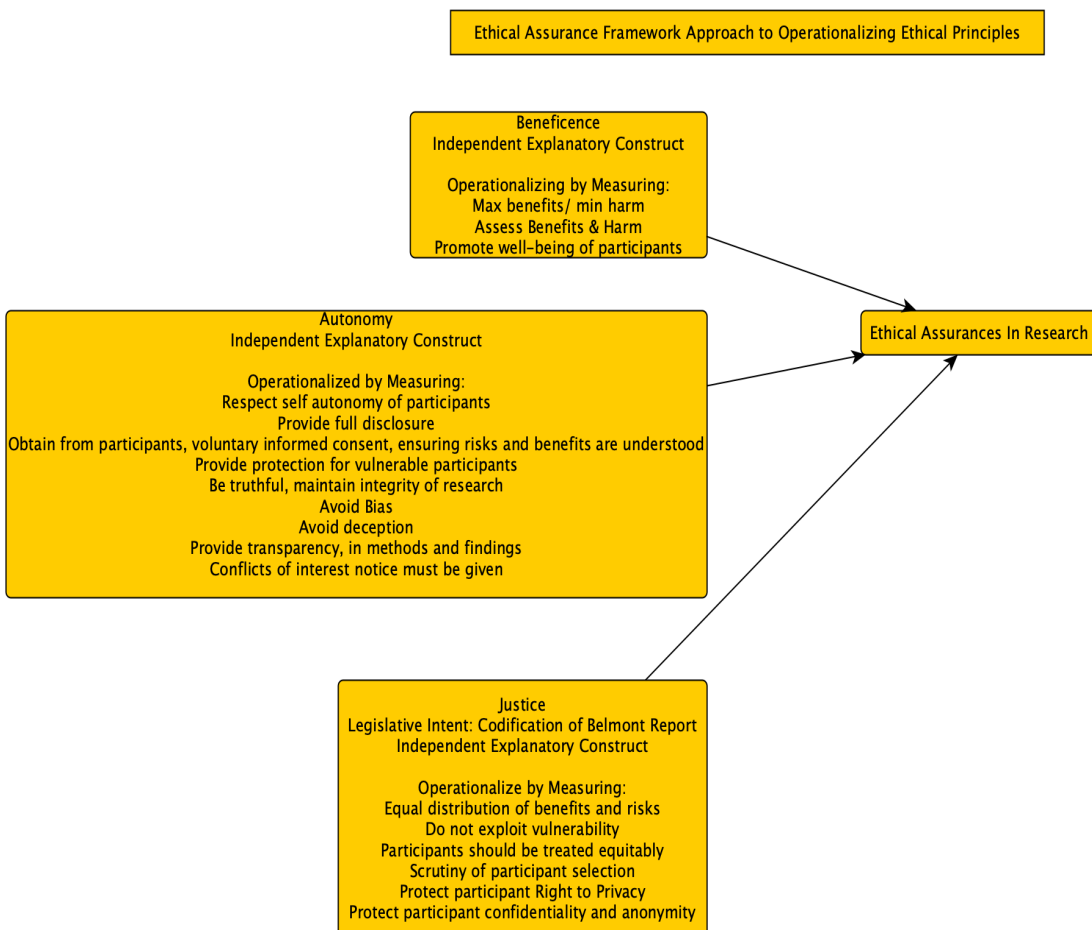
Sources: (Author's Own Work; Creswell & Creswell, 2022).

In terms of delimitations, the general boundary context of the quantitative methodological section of the research included the researcher's selection of the (a) theoretical perspective The extended theory of planned behavior constructs i.e. attitude, subjective norms, perceived behavioral control, usefulness, and ease of use, that guided the research; (b) data gathered by the outside 3rd party vendor Survey Monkey, and data filtration, trimming, and cleaning was performed to avoid biases; (c) data analysis was performed by applying Structural Equation Modelling techniques; (d) data reasonableness assessment, accomplished by performing statistical analysis of the alternative hypotheses to the null hypotheses to discover type 1 or type 2 errors; and (e) performance of data reliability assessment, accomplished by ensuring operationalization efforts were aligned with questions for each item of scale, and such questions were adopted from prior research with tested reliability coefficient of .70 or higher by Cronbach's alpha measurement.

Additionally, the researcher put in place pre-set statistical boundaries. Those statistical boundaries included: (a) the alpha significance level at .05; (b) the confidence level at 95%; (c) the beta level at .20; (d) power (1-beta) = .80; (e) two-tail test; and (f) effect size of .80. The reporting of the results conformed to APA 7th edition requirement standards.

Ethical Assurances

The researcher will strive to meet high ethical standards. Several ethical assurances will be adhered to. Figure 22 provides a linear framework of important ethical assurances.

Figure 22*Linear Ethical Assurance Analysis*

Sources: (Author's Own Work; HHS, 2025).

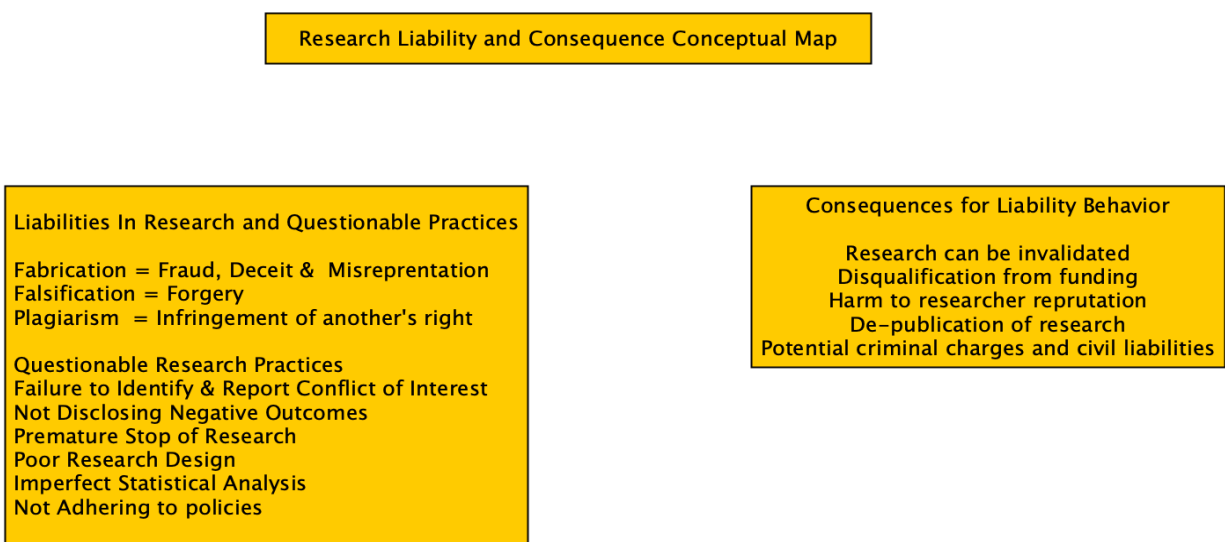
In the ethical assurance framework, there are several independent explanatory indicators that provide empirical accountability concerning the behavioral intention to use the Belmont Protection of Human Subject research rules to guide a research project. The independent constructs that contribute to the intentional behaviors and actual behaviors during a research exchange are beneficence, autonomy, and justice (HHS, 2025). Belief-based attitudes are influenced by beneficent environments that respect individual autonomy. Belief-based social norms are influenced by the environmental practice and application of individual justice.

For assessment in measurement purposes, those constructs may be operationalized and translated into numerical variables so an accountability may be made of the relevant noteworthy variables.

The Belmont philosophy indicates the rules and procedures to follow, in order to accomplish adherence to ethical principles that supports the human spirit. On the other hand, the Belmont code clearly identifies prohibitions, which will prevent harm to human subjects in research, below find Figure 23 that details harmful research practices.

Figure 23

Research Liability and Consequence Conceptual Map



Sources: (Author's Own Work; HHS, 2025).

Summary

In chapter three, Research Method, the researcher provided a description of the research methodology and design, a review of the research population and sample, and a discussion of the online survey instrument for data collection. Additionally, operational definitions of research variables were specified, along with a step-by-step data analysis plan. Finally, the researcher noted the assumptions involved with the research, limitations of the study, delimitations of the study set by the researcher, and reviewed the necessary ethical assurances.

The expanded theory of planned behavior is conducive to correlational methods. The constructs that are included in the expanded theory of planned behavior framework are amenable to quantitative measures and structural equation modelling analysis. It appears that the survey questionnaire can be an effective and efficient instrument to collect the quantitative data necessary for the statistical analysis, and answering the research questions. There are internal and external constraints that may place limits on the research efforts, such as time limitation, resource limitation, effective data limitation, effective methodology limitation, and effective inference limitation. Also, there are prescribed pre-set boundaries made by the researcher including theory as a framework, data gathering, data analysis, data reasonableness assessment, and data reliability assessment. Most importantly when involving human subjects as participants in a research project, the prescribed research behavior towards the research participant is to be respectful and apply beneficence, autonomy, and justice. The data collection procedures are intended to impose a minimal or no risk to participants. The next chapter will encompass the results of the data collection, data analysis, and an evaluation of the findings.

Chapter 4: Findings

The problem to be addressed in this study was, that dispute mediators use of the proactive Statistical Methods Convention (SMC) is not widespread, and met with resistance in the dispute mediation process, even though it had been demonstrated that SMC can increase efficiency and provide improvement. The purpose of this quantitative correlational design research was to better understand the dispute mediator's perspective and gain information on predicting the behavioral intentions of dispute mediators regarding the use of the statistical methods convention for dispute mediators by way of the theoretical framework of the theory of planned behavior (TPB) extended by technology acceptance model (TAM) constructs.

The expanded theory of planned behavior provides the constructs that influence as well as weighs upon an individual's subjective behavioral intention to make an action or decision. The statistical quantitative approach is chosen to optimize the methodology for this research study, by way of obtaining from statistical analytical information concerning trends, patterns and relationships, which can then be used to improve efficiency and effectiveness of expanded SMC methods and processes. Within the context of the quantitative approach, the correlational design will be used to explore the known anticipated factors that may influence this research topic. Such an approach and design were used to gain an understanding of the dispute mediator's use of the statistical methods convention (SMC) in the practice of dispute mediation. This research was purposed to explore how various factors weigh upon the dispute mediator's behavioral intention to ultimately use the SMC in the practice of dispute mediation. Those weighing factors include: (a) belief-based attitude, (b) belief-based subjective norm influences, (c) belief-based perceived behavioral control, (d) perception of usefulness, and (e) perception of ease of use. Those factors were operationalized to translate the expanded TPB theory constructs into measurable variables,

applicable to the current topic about the dispute mediator's behavioral intention to use the statistical methods convention in the dispute mediation practice (see Figure 19 and Table 6 on operationalization). The survey questionnaire data collection method will be used to gather information for this research study. The survey questionnaire contains 19 items, each on a 5-point Likert type sliding scale in order to obtain numeric insight. SurveyMonkey online platform will administer the survey questionnaires to dispute mediators located in the US, and the estimated number of samples to be taken was 250.

In order to consider whether this research study will be a success with statistical power, there are several items to consider, consisting of sample size, the number of predictor indicators, the alpha significance level, and the effect size. The researcher took a sample from a population indicated by the topical study as an initial methodological step. The sample size will weigh upon and gauge the likelihood of obtaining significant discovery of supporting hypothesized facts. With that in mind, G* Power software was used to compute a minimal sample size, providing for a minimal sample to be collected of 92. Another online sample size calculator was used indicating a minimum of 100. Final decision was to aim for 250 participants. Both software calculators required information input consisting of: (a) the number of indicator variables, which consist of 5 indicator variables; (b) the pre-set type 1 error probability of .05; (c) a minimal strength of difference effect size, Cohen's d standardize computation of .15; and (c) lastly, the pre-set probability estimate for the designation of the ability to identify a true effect power is set at .80. In summary, in order to consider whether this research study will be a success the ultimate power or probability for the researcher's hypothesis to identify a true effect, is influenced by 4 variables consisting of (1) sample size; (2) number of predictor variables; (3) the pre-set type 1 error estimate; and (3) effect size.

Validity and Reliability of the Data

The researcher processed the original data collected in several steps detailed below to ensure suitability for data analysis. The processing included data file preparation, data screening and cleaning, and assessment for normal distribution properties. Then, the researcher made assessments for validity and reliability.

Data Entry and Preparation

The raw data file was downloaded from the SurveyMonkey platform. The data was downloaded in an SPSS format. SPSS version 29 was used to open the data file and begin preparing the data file for statistical analysis of the data. Firstly, an assessment was made to ensure there were no personal identifiers of the study participants, and there were not. Additionally, security of the data was made by safeguarding it on a password protected computer, in a private area, with no public access. The data file was then formatted to label the data columns with the research variable designators, descriptions, and data characteristics.

Data Screening

To ensure data reliability, accuracy, elimination or reduction of bias, and readiness for statistical analysis the process of data cleaning was performed. The process of data cleaning included procedures to identify and correct for errors, identify data problems, and removing irrelevant data. The recruitment through SurveyMonkey rendered 343 qualified research participants. An assessment was done to see which of the responses were complete and useable. A complete and useable response would be one where the respondent answered all 19 questions. In this research study of the dispute mediator's behavioral intention to use the statistical methods convention, there were 305 complete and useable responses to the questions. An invalid response would be where the respondent did not answer one or more of the survey questions, and in this

case 38 did not answer one or more of the survey questions, and not-valid consequently they were removed.

Data Assessment for Non-Normality Bias

Moving forward with the screening series of steps, the data is assessed for shape distribution bias. This type of bias indicates a data distribution different from the normal distribution benchmark, which is symmetrical normally distributed dataset, having zero skewness, and having a kurtosis of approximately 2 to 4 (Field, 2024; Gravetter & Wallnau, 2017; Warner, 2021). Additionally, an assessment was done to discover if there was a problem with skewness tailedness shape of the data distribution. The collected data was processed and produced descriptive statistical results, including graphical presentations of frequency tables, *P-P* plots, and histograms (see Appendix F).

In the current study, the kurtosis statistics for the variables report varied from a lower value of -.204 to a high value of 1.00 (see Appendix D). The report presents kurtosis values within the range of +1 to -1. This data kurtosis output, is compared to the benchmark normal distribution of 3, showing data having a *slight* tendency to fall outside the normal (Field, 2024). Additionally, the report presents skewness values with a lower value of -.955 to a high value of -.596 (see Appendix E). This data skewness output, which shows data having fractional value of -1, compare to the normal distribution of zero skewness, showing the data having a slight tendency to perform outside the normal distribution (Field, 2024). Analyzing the shape of the distribution of data in comparison to the benchmark normal distribution has an informative purpose. Visual inspection of the *P-P* plots to the histograms, with added statistical numeric values, provides information about the data's height and spread in comparison to the height and spread of the benchmark normal distribution (see Appendix F).

Reliability

The purpose of reliability is based on consistency and preciseness. Reliability assessments are to ensure that the study can be replicated by other researchers and the results will be the same or similar (Trochim et al., 2016). Cronbach's Alpha Reliability Assessment: The researcher can help establish reliability of the scaled variables based on the questionnaire items by computing a Cronbach's alpha value. In this study the research indicator variables represent the measures of the constructs for the expanded Theory of Planned Behavior theoretical model (Hair et al., 2022; Salem et al., 2024). To ensure the quality of the variable measures, statistical tests were conducted. In the current research study, the Cronbach's alpha computation and the Composite reliability computation was used to establish the consistency and quality of the research variable measures.

The reliability of the variable measures was evaluated by using the Cronbach's alpha standard. The ranges consist of: .65 - .70 meeting the minimum acceptability standard; .70 - .80 being respectable; and .80 - .90 meeting the very good standard; while additionally composite reliability ranges are between .70 and .90, which is considered satisfactory, over .90 - .95 not desirable, and over .95 definitely not desirable (Field, 2024; Hair et al., 2022; Salem et al., 2024). This research found that variable measures met the Cronbach's alpha standards with measures for attitude .75, for norms .71, for control .72, for usefulness .71, for ease of use .70, and for intention .82, where five are all within the respectable range of .70 - .80 and one is considered very good. Additionally, the variable measures met the satisfaction of the Composite reliability standard with the following measures: for attitude .86, for norms .84, for control .84, for usefulness .84, for ease of use .83, and for intention .88, which are all within the satisfactory range of .70 - .90. The details for the reliability assessment are summarized in Table 10.

Table 10*Reliability Computations for Variable Measures*

Research Variable	Factor loadings	Cronbach's alpha	Composite Reliability
Attitude	.85, .83, .78	.75	.86
Subjective Norms	.79, .79, .80	.71	.84
Perceived Control	.75, .79, .85	.72	.84
Perceived Usefulness	.82, .75, .82	.71	.84
Perceived Ease of Use	.80, .76, .80	.70	.83
Behavioral Intention	.81, .81, .81, .80	.82	.88

Note. The factor loading standard is minimum 0.708 being suitable, suggesting that the construct explains over 50% of the indicator's variance. Cronbach's alpha standards include: .60 - .65 as unacceptable, .65 - .70 as minimally acceptable, .70 - .80 as respectable, and .80 - .90 as very good. Composite reliability standards include: .70 - .90 as satisfactory, over .90 - .95 not desirable, and over .95 definitely not desirable, however, the more indicators used, the higher the value (Hair et al., 2022; Salem et al., 2024; Sobaih & Elshaer, 2022).

Validity

The purpose of validity relates to measurements. Validity assessment is to determine how accurately a method measures what it is supposed to measure. Discriminant validity Assessment: for measurement purposes, this assessment considers whether the construct being measured is not closely correlated with the measures of other constructs in the theory. In the current research study, both convergent validity and discriminant validity assessment procedures are used together to ensure that the instrument measures the construct it is intended to measure. To make such an evaluation, an assessment is performed by using two opposite scrutinizing tools, consisting of the convergent validity tool and the discriminant validity tool.

The convergent validity tool, is based on the closeness of relatedness, within a theoretical framework, convergent validity measures the relationship between the observed variable and the construct. The Average Variance Extracted standard (AVE) establishes that an AVE value of 0.5

or higher is acceptable because it explains over 50% of the variance in the indicators (Hair et al., 2022; Salem et al., 2024). In the current research study, all of the research variables had AVE's greater than .50. This research provided: attitude with an AVE of .67; norms with an AVE of .63; controls with an AVE of .64; usefulness with an AVE of .63; ease of use with an AVE of .62; and intentions with an AVE of .65. Additionally, an assessment based on the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was made. The KMO result was .952 indicating a high degree of sampling adequacy (Field, 2024). Along with the KMO, Bartlett's test of sphericity was computed, resulting in a statistically significant value. This further confirms the adequacy of the sampling (Field, 2024; and see Figure 24).

Figure 24

SPSS Results for KMO and Bartlett's Test

KMO and Bartlett's Test		
Kaiser–Meyer–Olkin Measure of Sampling Adequacy.		.952
Bartlett's Test of Sphericity	Approx. Chi-Square	2875.858
	df	171
	Sig.	<.001

Note. Analysis done on all survey data sample size 305. Figure is a snapshot from output produced by IBM SPSS version 29 software.

On the other hand, discriminant validity, is based on the distance of relatedness, within a theoretical framework, determining to what extent two measured variables are not related or discriminate. The standard for discriminant validity (DV) is a calculated relative value and indicates: DVs below .70 indicate good DV; however, DVs above .70 imply issues due to lack of distinctiveness as the indicators may be measuring the same thing (Hair et al., 2022; Salem et al., 2024). The current research provide calculated relative ceiling for the DVs as follows: attitude

with a DV of .82; norms with a DV of .79; controls with a DV of .80; usefulness with a DV of .79; ease of use with a DV of .78; and intention of a DV of .81. To illustrate the computed value of the DV see Table 11, where the bolded number dictates the ceiling DV value, other values should be less than the relative ceiling DV for validity acceptability. In this case, all of the correlations of variable pair combinations were lower than the square root of the AVE, demonstrating discriminant validity (Hair et al., 2022; and see Table 11).

Table 11

Research Variable AVE and Discriminant Validity Assessment (Fornell-Larker Criterion)

Research Variable	1	2	3	4	5	6	AVE
1. Attitude	0.82	-	-	-	-	-	.67
2. Subjective Norms	0.70	0.79	-	-	-	-	.63
3. Perceived Control	0.68	0.70	0.80	-	-	-	.64
4. Perceived Usefulness	0.66	0.66	0.72	0.79	-	-	.63
5. Ease of Use	0.65	0.61	0.73	0.69	0.78	-	.62
6. Behavioral Intention	0.64	0.65	0.74	0.75	0.70	0.81	.65

Note. The values on the diagonal in bold are square roots of the average variance extracted (AVEs). The values below the bold diagonal are the correlations between research variable pairs. The discriminant validity process allows for a comparative assessment to the adjacent construct, to observe the difference between the constructs. When the square root of the AVE is greater than the correlation between other research variable pairs, there is evidence of discriminant validity (Hair et al., 2022; Salem et al., 2024).

Predictive Validity and Cross-Validated Predictive Ability Test (CVPAT).

Researchers now recommend additional assessments of the structural model. The cross-validated predictive ability test and out of sample predictive power test, explores the strength of the research model by testing against the benchmarks of (a) indicator average benchmark (IA), and (b) the linear model prediction benchmark (LM), focusing on the endogenous constructs in the model (Hair et al., 2022; Sharma et al., 2022). Comparing to the IA benchmark is the first level

to demonstrate basic predictive power, while comparing to the LM benchmark is even more stringent, and can demonstrate *strong* predictive power. The comparison to the benchmark is made by computing the average predictive power loss of the PLS research model and the benchmark model, and analyzing whether the difference of the two is statistically significant (Hair et al., 2022; Sharma et al., 2022). If the loss difference is negative, then the PLS research model has less predictive power loss than the benchmark. This is done here for endogenous variables of intent, attitude, and perceived usefulness, as well as for all of them together overall. The results of the SmartPLS analysis for CVPAT and predictive power are shown in Table 12.

Table 12*Predictive Validity and Cross-Validated Predictive Ability Test (CVPAT)*

Computed Values	Endogenous Variables			
	INT	ATT	PU	Overall
<u>IA Benchmark (basic)</u>				
PLS Loss	0.51	0.52	0.56	0.53
IA Loss	0.84	0.72	0.80	0.79
Average Loss Difference	-0.32	-0.19	-0.24	-0.26
<i>p</i> -Value	***	***	***	***
<u>LM Benchmark (stronger)</u>				
PLS Loss	0.51	0.52	0.56	0.53
LM Loss	0.51	0.47	0.53	0.51
Average Loss Difference	-0.00	0.05	0.03	0.02
<i>p</i> -Value	0.89	0.01	0.14	0.03
<u>Out of Sample Predictive Power</u>				
Q^2	0.60	0.41	0.47	n/a

Note. INT = Intention; ATT = Attitude; PU = Perceived Usefulness; IA = Indicator Average; LM = Linear Model.

*** $p < .001$.

In terms of CVPAT and the IA benchmark, all of the individual endogenous variables, as well as the overall test including all three of the endogenous variables, showed a statistically

significant difference in loss from the IA benchmark, demonstrating basic predictive power better than the IA benchmark. In terms of the more stringent LM benchmark, the research model showed significantly better predictive power overall, and for the attitude construct (see Table 12). In the case of the LM benchmark for strong predictive power, the research model is partly confirmed for strong predictive power.

The Q^2 measure is for *out of sample* predictive power. The SmartPLS algorithm sets up a training sample to retest the research model, where the rubric standard is a value greater than zero, with 0.02, 0.15, 0.35, being weak, medium, and strong predictive relevance respectively (Hair et al., 2022; Sharma et al., 2022). In this case all of the endogenous variable calculations were above 0.35 showing strong predictive relevance of the research model (see Table 12).

Results

Bivariate Analysis

The researcher began bivariate analysis with descriptive information for the research variables. Each research variable included statistics for mean, standard deviation, range, minimum score, and maximum score. The descriptive information is summarized in Table 13.

Table 13

Descriptive Information for Research Variables (n = 305)

Research Variable	Mean	Std. Deviation	Range	Min. Score	Max. Score
Attitude	12.09	2.067	9	6	15
Subjective Norms	11.62	2.309	12	3	15
Perceived Control	11.91	2.113	11	4	15
Perceived Usefulness	11.87	2.133	9	6	15
Perceived Ease of Use	11.78	2.223	9	6	15
Behavioral Intention	15.96	2.948	16	4	20

In order to examine the correlational relationship of the numeric values corresponding to the variables regarding the research questions, the researcher used SPSS version 29 software for a Pearson coefficient calculation of the strength and direction of such relationship. The order of reporting operations are as follows: A two tail test was specified, the sample size of 305 was used for each test, along with an alpha significance level of .05, to obtain the Pearson correlation coefficient, and the actual calculated p value. Additionally, a bootstrapped 95% confidence level was established with the upper and lower bounds of the confidence interval calculated and reported. Bootstrapping helped in the assessment to account for the identified irregularity in normality assumptions. Lastly, the effect size based on Pearson correlation is included to reference the magnitude of the relationship. The results for each research question, the testing of the null hypotheses, and decision on the researcher's alternative hypothesis are as follows:

RQ1/ H1_a

What is the relationship between a dispute mediator's *attitude* toward the use of the statistical methods convention for dispute mediators; and a dispute mediator's *intention* to use the statistical methods convention for dispute mediators? *H1_a*: There is a significant correlational relationship between a DM's *attitude* towards the use of the SMC-DM; and a DM's *intention* to use the SMC-DM.

Reporting operation: A two-tail test was taken on $n = 305$ samples, with an alpha significance level set at .05. Resulting Pearson correlation coefficient $r = 0.644$, actual $p < .001$, 95% CI [0.567, 0.716]. The Pearson correlation coefficient of $r = 0.644$, and $r^2 = 0.415$ is considered a moderate to high effect, such that the effect accounts for over 41% of the variance (Field, 2024). Therefore, the null hypothesis is rejected, which provides evidence to support the

alternative hypothesis, that there is a statistically significant relationship between the predictor variable of attitude and outcome variable of behavioral intention.

RQ2/ H2_a

What is the relationship between a dispute mediator's *subjective norms* regarding the use of the statistical methods convention for dispute mediators; and a dispute mediator's *intention* to use the statistical methods convention for dispute mediators? *H2_a*: There is a significant correlational relationship between a DM's *subjective norms* regarding the use of the SMC-DM; and a DM's *intention* to use the SMC-DM.

Reporting operation: A two-tail test was taken on $n = 305$ samples, with an alpha significance level set at .05. Resulting Pearson correlation coefficient $r = 0.649$, actual $p < .001$, 95% CI [0.553, 0.732]. The Pearson correlation coefficient of $r = 0.649$, and $r^2 = 0.421$ is considered a large effect, such that the effect accounts for over 42% of the variance (Field, 2024). Therefore, the null hypothesis is rejected, which provides evidence to support the alternative hypothesis, that there is a statistically significant relationship between the predictor variable of subjective norms and outcome variable of behavioral intention.

RQ3/ H3_a

What is the relationship between a dispute mediator's *perceived behavioral control* towards the use of the statistical methods convention for dispute mediators; and a dispute mediator's *intention* to use the statistical methods convention for dispute mediators? *H3_a*: There is a significant correlational relationship between a DM's *perceived behavioral control* towards the use of the SMC-DM; and a DM's *intention* to use the SMC-DM.

Reporting operation: A two-tail test was taken on $n = 305$ samples, with an alpha significance level set at .05. Resulting Pearson correlation coefficient $r = 0.729$, actual $p < .001$,

95% CI [0.666, 0.797]. The Pearson correlation coefficient of $r = 0.729$, and $r^2 = 0.531$ is considered a large effect, such that the effect accounts for over 53% of the variance (Field, 2024). Therefore, the null hypothesis is rejected, which provides evidence to support the alternative hypothesis, that there is a statistically significant relationship between the predictor variable of perceived behavioral control and outcome variable of behavioral intention.

RQ4/ H4_a

What is the relationship between a dispute mediator's *perceived usefulness* towards the use of the statistical methods convention for dispute mediators; and a dispute mediator's *intention* to use the statistical methods convention for dispute mediators? *H4_a*: There is a significant correlational relationship between a DM's *perceived usefulness* towards the use of the SMC-DM; and a DM's *intention* to use the SMC-DM.

Reporting operation: A two-tail test was taken on $n = 305$ samples, with an alpha significance level set at .05. Resulting Pearson correlation coefficient $r = 0.746$, actual $p < .001$, 95% CI [0.688, 0.797]. The Pearson correlation coefficient of $r = 0.746$, and $r^2 = 0.556$ is considered a large effect, such that the effect accounts for over 55% of the variance (Field, 2024). Therefore, the null hypothesis is rejected, which provides evidence to support the alternative hypothesis, that there is a statistically significant relationship between the predictor variable of perceived usefulness and outcome variable of behavioral intention.

RQ5/ H5_a

What is the relationship between a dispute mediator's *perceived ease of use* towards the use of the statistical methods convention for dispute mediators; and a dispute mediator's *intention* to use the statistical methods convention for dispute mediators? *H5_a*: There is a

significant correlational relationship between a DM's *perceived ease of use* towards the use of the SMC-DM; and a DM's *intention* to use the SMC-DM.

Reporting operation: A two-tail test was taken on $n = 305$ samples, with an alpha significance level set at .05. Resulting Pearson correlation coefficient $r = 0.701$, actual $p < .001$, 95% CI [0.634, 0.764]. The Pearson correlation coefficient of $r = 0.701$, and $r^2 = 0.491$ is considered a large effect, such that the effect accounts for 49% of the variance (Field, 2024). Therefore, the null hypothesis is rejected, which provides evidence to support the alternative hypothesis, that there is a statistically significant relationship between the predictor variable of perceived ease of use and outcome variable of behavioral intention. A summary of the Pearson correlation analysis is provided in Table 14. Additionally, graphical analysis by way of scatterplots to assess the linear relationship between the variables are summarized in Appendix G. The graphical assessment demonstrates linearity.

Table 14

Calculated Pearson Correlation Coefficients and Bivariate Hypotheses Tests (n = 305)

Bivariate Relationship	Pearson Coefficient	Alternative Hypothesis	Supported?
Attitude & Intention	.644**	<i>H1a</i>	Yes
Subjective Norms & Intention	.649**	<i>H2a</i>	Yes
Perceived Control & Intention	.729**	<i>H3a</i>	Yes
Perceived Usefulness & Intention	.746**	<i>H4a</i>	Yes
Ease of Use & Intention	.701**	<i>H5a</i>	Yes

** $p < .01$ (2-tailed test).

Multivariate Analysis: Measurement Model

The Extended Theory of Planned Behavior provided the framework for the evaluation of the constructs for the measurement model. The evaluation provided information concerning the correlation and linearity of the extended TPB constructs. To corroborate reliability the Cronbach's alpha and composite reliability measurement was computed, and to substantiate validity the average variance extracted (AVE), factor loadings, and comparison test for discriminant validity was performed. The measurement model assessment evaluated the extended TPB framework's constructs for reliability and validity. The assessment included Cronbach's alpha and composite reliability, which produced acceptable results, as well as AVE, factor loadings, and discriminant test, which also provided positive results.

Cronbach's Alpha and Composite Reliability. Cronbach's alpha range can be between 0 and 1, where .60-.65 is unacceptable, .65-.70 minimally acceptable, .70-.80 respectable, and .80-.90 very good. The current research results provided acceptable results, all above a respectable .70 (see Table 15). Composite reliability ranges are .70-.90 satisfactory, above .90-.95 not desirable and above .95 definitely not desirable. The current research results provided values in the satisfactory range (see Table 15).

Table 15

Reliability Computations for Variable Measures

Research Variable	Cronbach's alpha	Composite Reliability
Attitude	.75	.86
Subjective Norms	.71	.84
Perceived Control	.72	.84
Perceived Usefulness	.71	.84
Perceived Ease of Use	.70	.83
Behavioral Intention	.82	.88

Average Variance Extracted. The validity measurements of AVE, has measurement ranges, indicating various levels of acceptability for convergent validity. Average variance extracted (AVE) .50 or higher indicates that on average the construct explains more than half of its indicators. The current research outcomes provide results of .67 for the attitude construct; .63 for the subjective norms construct; .64 for the perceived behavioral control construct; .63 for the perceived usefulness construct; .62 for the ease of use construct; and .65 for the behavioral intention construct (see Table 16).

Table 16

Research Variable Average Variance Extracted (AVE)

Research Variable	AVE
1. Attitude	.67
2. Subjective Norms	.63
3. Perceived Control	.64
4. Perceived Usefulness	.63
5. Ease of Use	.62
6. Behavioral Intention	.65

Factor Loadings. Factor loadings of above 0.708 are acceptable, demonstrating that the construct explains more than 50% of the indicators' variance. The data analysis results provide acceptable outcomes: for the construct of attitude the factor loadings were .85, .83, .78; for subjective norms .79, .79, .80; for perceived behavioral control .75, .79, .85; for perceived usefulness .82, .75, .82; for perceived ease of use .80, .76, .80.; and for behavioral intention .81, .81, .81, .80. The factor loadings are summarized in Table 17.

Table 17*Research Variable Factor Loadings*

Research Variable	Survey Question Items	Factor loadings	Item Reliability
Attitude	1, 2, 3	.85, .83, .78	Yes ***
Subjective Norms	4, 5, 6	.79, .79, .80	Yes ***
Perceived Control	7, 8, 9	.75, .79, .85	Yes ***
Perceived Usefulness	10, 11, 12	.82, .75, .82	Yes ***
Perceived Ease of Use	13, 14, 15	.80, .76, .80	Yes ***
Behavioral Intention	16, 17, 18, 19	.81, .81, .81, .80	Yes ***

Note. All factor loadings are positive. The factor loading standard is minimum 0.708 being suitable, suggesting that the construct explains over 50% of the indicator's variance, demonstrating item reliability (Hair et al., 2022).

*** $p < .001$.

Discriminant Validity. The validity measurement of *Discriminant Validity* process allows for a comparative assessment to the adjacent constructs, to observe the difference between the constructs. For example, here the comparison between the measures for attitude of .82 and the correlation of the attitude construct and the subjective norms construct is .70, which means that the measure for attitude is distinctive for the attitude construct, and not for the subjective norms construct. The correlation between the given construct and another construct is lower than the connection of the measures for the given construct, demonstrating discriminant validity. All of the constructs in the research model demonstrated sufficient discriminant validity (see Table 18).

Table 18*Research Variable AVE and Discriminant Validity Assessment (Fornell-Larker Criterion)*

Research Variable	1	2	3	4	5	6	AVE
1. Attitude	0.82	-	-	-	-	-	.67
2. Subjective Norms	0.70	0.79	-	-	-	-	.63
3. Perceived Control	0.68	0.70	0.80	-	-	-	.64
4. Perceived Usefulness	0.66	0.66	0.72	0.79	-	-	.63
5. Ease of Use	0.65	0.61	0.73	0.69	0.78	-	.62
6. Behavioral Intention	0.64	0.65	0.74	0.75	0.70	0.81	.65

Note. The values on the diagonal in bold are square roots of the average variance extracted (AVEs). The values below the bold diagonal are the correlations between research variable pairs. The discriminant validity process allows for a comparative assessment to the adjacent construct, to observe the difference between the constructs. When the square root of the AVE is greater than the correlation between other research variable pairs, there is evidence of discriminant validity (Hair et al., 2022; Salem et al., 2024).

The Structural Model

The first steps in assessing the structural model are to check for collinearity, by way of examining the sets of exogenous predictor constructs. The purpose of this is to get an idea if each construct is providing its own predictive measures, or is there cross-over between other predictive constructs (Hair et al., 2022). After checks for collinearity, the path coefficients are computed with significance tests, and the R^2 is reported and discussed.

Variance Inflation Factor. The metric used for collinearity of the research constructs is the variance inflation factor (VIF). The standard for VIF to demonstrate the lack of collinearity is generally a value of 5, with a more stringent level of 3.3 (Hair et al., 2022; Nurtanto et al., 2025). In this case all the VIF measures for the predictor constructs were below 3, providing assurance that there are no collinearity issues (see Table 19).

Table 19*Model Quality Assessment: Collinearity/Variance Inflation Factor (VIF)*

Predictor Variables	VIF
ATT	2.41
SN	2.51
PBC	2.71
PU	2.44
EOU	1.91

Path Analysis. The second step in assessing the structural model is to look at the individual path coefficients (See Figure 25). The paths should be tested for significance, in this case using a two-tail test with a significance level of .05, all of the measured path coefficients with their associated significance tests are displayed in Table 20. Attitude appears to work better as a mediator.

Table 20*Path Coefficients and Significance*

Predictor Variables	Path	Coefficient	<i>t</i> -value	<i>CI</i>	Significant?
Attitude	ATT→INT	.10	1.52	[-0.03, 0.22]	N (<i>p</i> = .13)
Subjective Norms	SN→INT	.10	1.36	[-0.04, 0.26]	N (<i>p</i> = .17)
Behavioral Control	PBC→INT	.33	4.67	[0.19, 0.47]	Y (***)
Usefulness	PU→INT	.38	5.24	[0.23, 0.51]	Y (***)
Ease of Use	PU→ATT	.41	6.47	[0.29, 0.53]	Y (***)
	EOU→ATT	.36	5.64	[0.23, 0.49]	Y (***)
	EOU→PU	.69	19.21	[0.61, 0.75]	Y (***)

Note. All coefficients are standardized and positive. *CI* = confidence interval = 95%. 5000 bootstrap samples, bias corrected.

p* < .05. *p* < .01. ****p* < .001 (2-tailed test).

Hypothesis Testing of Intervening Variables. There are many mechanisms that have varying degrees of influence on relationships, that is why information is needed concerning their influencing effects within the research theoretical framework. Baron and Kenny (1986) developed the theoretical perspective, framework, and model for statistical mediation, and the system has improved the ability to make good research decisions. The theoretical perspective was purposed to discover effects, so consequential decisions could be made. Examples of consequential decisions that may be made are: (a) If there is only a direct effect (not in the presence of a intervenor/mediator) with a statistically insignificant indirect effect, then perhaps there is a questionable mediator in the relationship; (b) If there is no direct effect and no indirect effect, then a problem with the theoretical framework may be indicated; and (c) If the total effect is statistically significant but the direct effect and indirect effect are not statistically significant, then this may be an indication that the sample size does not have enough power to show effect when there is one (Nitzl et al., 2016; Zhao et al., 2010). The results of the analysis are as follows, and are summarized in Table 21.

RQ6: How does a dispute mediator's *attitude* towards the use of the statistical methods convention for dispute mediators; intervene in the relationship between a dispute mediator's *perceived usefulness* of the statistical methods convention for dispute mediators, and a dispute mediator's *intention* to use the statistical methods convention for dispute mediators?

H6: There is no significant correlational intervention, by a DM's *attitude* towards the use of the SMC-DM; on the relationship between a DM's *perceived usefulness* of the SMC-DM, and a DM's *intention* to use the SMC-DM.

H6_a: There is a significant correlational intervention, by a DM's *attitude* towards the use of the SMC-DM; on the relationship between a DM's *perceived usefulness* of the SMC-DM, and a DM's *intention* to use the SMC-DM.

The results provided that the decision on the intervening variable of attitude (ATT) null hypothesis H6 *was* to fail to reject the null hypothesis (see Table 20). There was no statistically significant intervention, by a DM's *attitude*; on the relationship between a DM's *perceived usefulness* of the SMC-DM, and a DM's *intention* to use the SMC-DM, indirect effect = 0.04, $p = .13$, 95% CI [-0.01, 0.09]. The statistical decision was to fail to reject the null hypothesis, while holding all other variables constant, attitude *did not* mediate the relationship between perceived usefulness and behavioral intention.

RQ7: How does a dispute mediator's *perceived usefulness* of the statistical methods convention for dispute mediators; intervene in the relationship between a dispute mediator's *perceived ease of use* of the statistical methods convention for dispute mediators; and a dispute mediator's *attitude* towards the use of the statistical methods convention for dispute mediators?

H7₀: There is no significant correlational intervention, by a DM's *perceived usefulness* of the SMC-DM; on the relationship between a DM's *perceived ease of use* of the SMC-DM, and a DM's *attitude* towards the use of the SMC-DM.

H7_a: There is a significant correlational intervention, by a DM's *perceived usefulness* of the SMC-DM; on the relationship between a DM's *perceived ease of use* of the SMC-DM, and a DM's *attitude* towards the use of the SMC-DM.

The results provided that the decision on the intervening variable of perceived usefulness (PU) null hypothesis H7 *was* to reject the null hypothesis (see Table 20). There is a statistically significant intervention by a DM's *perceived usefulness* of the SMC-DM; on the relationship

between a DM's *perceived ease of use* of the SMC-DM, and a DM's *attitude* towards the use of the SMC-DM, indirect effect = 0.28, $p < .001$, 95% CI [0.19, 0.38]. The statistical decision was to reject the null hypothesis, while holding all other variables constant, perceived usefulness *does* mediate the relationship between perceived ease of use and attitude. Further discussion, the total effect is 0.65 when reduced by the indirect effect of 0.28 results in a direct effect of 0.36; because the indirect effect was statistically significant, it was found to have a partial intervening effect.

Table 21

Hypothesis Testing of Intervening Variables (n=305)

Hypothesis # (Intervening Variable) Path Relationship	Indirect Effect (<i>p</i> -value)	Direct Effect (<i>p</i> -value)	Total Effect (<i>p</i> -value)	95% CI		Decision (Intervention Characteristic)
				<i>LL</i>	<i>UL</i>	
H6 (Attitude) PU→ATT→INT	0.04 (.13)	0.38 (***)	0.42 (***)	-0.01	0.09	Not Supported (No Mediation)
H7 (Perceived Usefulness) EOU→PU→ATT	0.28 (***)	0.36 (***)	0.65 (***)	0.19	0.38	Supported (Partial Mediation)

Note. PU = Perceived Usefulness; ATT = Attitude; INT = Intent; EOU = Perceived Ease of Use; CI = confidence interval; *LL* = lower limit; *UL* = upper limit. Standardized path coefficients reported, using two-tail test, 5000 bootstrap samples bias corrected, and 95% confidence interval for indirect effect.

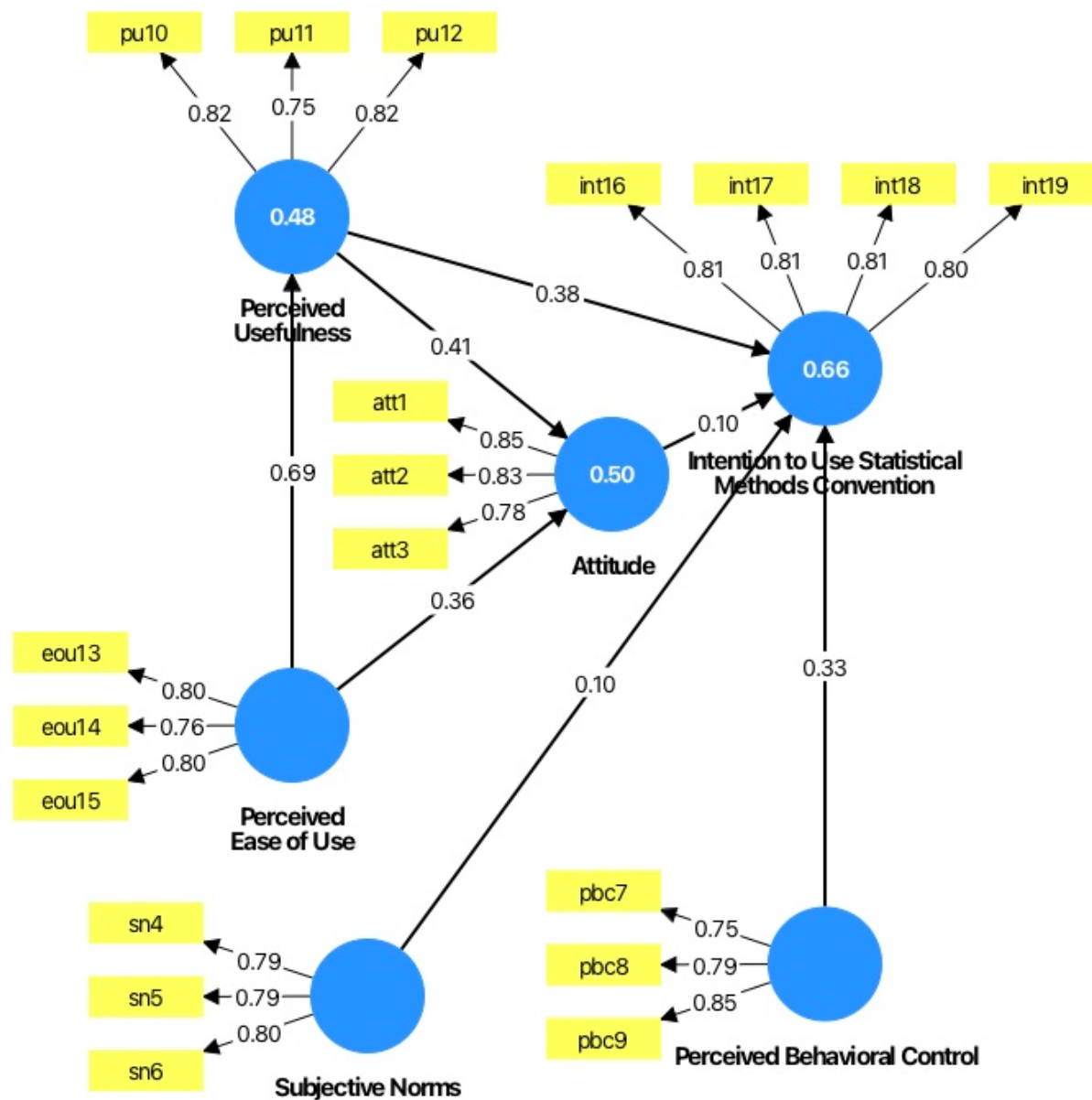
*** $p < .001$ (2-tailed test).

Predictive Capability of Model R Squared. Further, the *predictive capability* of the structural model was examined by way of the R squared coefficient. For the complete model of the outcome variable of the dispute mediator's intention to use the statistical methods convention, the R^2 is .66 (see Figure 25). The standards for R^2 include .25 equals weak; .50

equals moderate; and .75 equals substantial (Hair et al., 2022). In this case, the .66 falls between moderate and substantial, and shows that 66% of the variance of the predictor variables can be explained by the research model.

Figure 25

SEM Graphical Output for Research Model



Model $R^2 = .66$

Note: Graphical output produced by SmartPLS version 4.1.1.2.

Effect Size of the Exogenous Predictor Constructs. Additional statistical analysis was done to examine the effect size. Cohen's f^2 effect size was used as rubric, which reanalysis's the research model without the given construct, comparing the result of the construct included and excluded, which gives an idea of the impact of the construct on the research model (Hair et al., 2022). The results of the effect size analysis are summarized in Table 22.

Table 22

Effect Sizes of the Exogenous Predictor Constructs

Exogenous Predictor Constructs	Cohen's f^2 Effect Size	Model Impact Magnitude
Subjective Norms (SN to Intent pathway)	.01	No effect
Perceived Behavioral Control (PBC to Intent pathway)	.12	Near Medium
Perceived Usefulness (PU to Intent pathway)	.17	Medium
Perceived Ease of Use (EOU to PU pathway)	.91	Large

Note: Span for Cohen's f^2 (a) less than .02 no effect; (b) .02 = small; (c) .15 = Medium; (d) .35 large (Hair et al., 2022).

Evaluation of the Findings

Research question number one inquiry was about the relationship between a dispute mediator's *attitude* toward the use of the statistical methods convention for dispute mediators, and a dispute mediator's *intention* to use the statistical methods convention for dispute mediating.

- Direct Relationship: Attitude -----→ Intention.
- Empirical Outcome: Statistically Significant and positive relationship (A→I).

The researcher hypothesized the research results to be a statistically significant and positive relationship. The empirical research results indicated a statistically significant and positive relationship. The results were also in line with the theoretical foundations (Davis et al., 1989; Fishbein & Ajzen, 2010). Even though the statistical methods convention is a fairly new phenomenon, it means that dispute mediators have positive attitudes toward using the statistical methods convention for dispute mediation. Perhaps this is due to the components of the statistical methods convention gaining favorable popularity in society for bolstering an individual's capability and efficiency. This result was in line with recent research (Ikhsan et al., 2025; Jiao & Cao, 2024).

Research question number two inquiry was about the relationship between a dispute mediator's *subjective norms* regarding the use of the statistical methods convention for dispute mediators, and a dispute mediator's *intention* to use the statistical methods convention for dispute mediating.

- Direct Relationship: Subjective norms -----→ Intention.
- Empirical Outcome: Statistically Significant and positive relationship (SN→I).

The researcher hypothesized the research results to be a statistically significant and positive relationship. The empirical research results indicated a statistically significant and positive relationship. The results were also in line with the theoretical foundations (Fishbein & Ajzen, 2010). This appears to demonstrate that positive encouragement comes from both the injunctive normative-based significant others' approval of intention to use the SMC, or the descriptive normative-based observing significant others also intending to use the SMC. Here again, progressive components of the statistical methods convention are popularly accepted and being

used by members of organizations and communities, due to their ability to more efficiently provide a value-added capability to the social exchange.

This result was also in line with research (Ikhsan et al., 2025; Jiao & Cao, 2024).

Research question number three inquiry was about the relationship between a dispute mediator's *perceived behavioral control* toward the use of the statistical methods convention for dispute mediators, and a dispute mediator's *intention* to use the statistical methods convention for dispute mediating.

- Direct Relationship: Perceived Behavioral Control -----→ Intention.
- Empirical Outcome: Statistically Significant and positive relationship (PBC→I).

The researcher hypothesized the research results to be a statistically significant and positive relationship. The empirical research results indicated a statistically significant and positive relationship. The results were also in line with the theoretical foundations (Ajzen, 1991; Fishbein & Ajzen, 2010). The meaning of these results shows a positive incline of resources in time, money, and skills capabilities control factors. Progressive components of the statistical methods have opened up opportunities that facilitate personal and organizational growth. Dispute mediators may have a sense that the SMC is more within their control to use, since the technology is becoming better developed. This result is also in line with recent research (Jiao & Cao, 2024).

Research question number four inquiry was about the relationship between a dispute mediator's *perceived usefulness* toward the use of the statistical methods convention for dispute mediators, and a dispute mediator's *intention* to use the statistical methods convention for dispute mediating.

- Direct Relationship: Perceived Usefulness -----→ Intention.

- Empirical Outcome: Statistically Significant and positive relationship (PU→I).

The researcher hypothesized the research results to be a statistically significant and positive relationship. The empirical research results indicated a statistically significant and positive relationship. The results were also in line with the theoretical foundations (Davis et al., 1989; Park, 2009). Perhaps these results mean that dispute mediators see virtues of using the SMC in their dispute mediation processes, and that the SMC could be useful in practice. This result was also in line with recent research (Kelly et al., 2023; Sukma et al., 2023).

Research question number five inquiry was about the relationship between a dispute mediator's *perceived ease of use* toward use of the statistical methods convention for dispute mediators, and a dispute mediator's *intention* to use the statistical methods convention for dispute mediating.

- Direct Relationship: Perceived Ease of Use -----→ Intention.

- Empirical Outcome: Statistically Significant and positive relationship (PEOU→I).

The researcher hypothesized the research results to be a statistically significant and positive relationship. The empirical research results indicated a statistically significant and positive relationship. The results were also in line with the theoretical foundations (Humida et al., 2022). The result means that dispute mediators who perceive the SMC to be easy to use will have a greater intention to use the SMC in their practice. This result was also in line with recent research (Humida et al., 2022).

An intervening variable also known as a mediating variable provides an explanation concerning the mechanism that impacts the independent variable onto the dependent variable. The intervening variable, a mechanism, presents itself as an indirect effect (Baron & Kenny, 1986). This indirect effect requires sequential phases, by way of an independent variable

affecting an intervening variable, which then goes forward to affect a dependent variable. The intervening analytical system produces comparative protocols, consisting of 3 separate effects; (a) the total effect, (b) the direct effect, and (c) the indirect effect, which have been developed historically and used by researchers modernly (Baron & Kenny, 1986; Hair et al., 2022; Zhao et al., 2010). The total effect is the stand-alone effect of the independent variable on the dependent variable. The direct effect is in the presence of the mediator, the effect of the independent variable on the dependent variable. The indirect effect is the effect of the independent variable on the mediator, which then effects the dependent variable. Developed by Baron and Kenny (1986), the intervening system measures and compares: the total effect; to the direct effect; to the indirect effect. The theoretical perspective guides the analysis of the mediating effect by using the comparative-difference test, by taking the difference between the total effect and the direct effect in order to determine the indirect effect be it full mediation or partial mediation.

Full intervention/mediation is when: (a) the direct effect is not statistically significant; and (b) where the indirect approach is statistically significant, indicating that the x effect is completely transmitted through the intervenor to y. The theoretical perspective states that full intervention/mediation suggests that an explanation has been given and no additional research is required concerning the mechanism by which an independent variable influences a dependent variable (Baron & Kenny, 1986; Hair et al., 2022; Zhao et al., 2010). Partial intervention/mediation is when: (a) the direct effect is statistically significant; and (b) where the indirect effect remains statistically significant as mediated, indicating that x effect is partially transmitted through the intervenor to y. Partial mediation is a more reasonable and progressive outcome suggesting that an explanation has been given, however additional research is indicated.

Research question number six inquiry was concerning a dispute mediator's *attitude* towards the use of the statistical methods convention for dispute mediators; the mediated relationship of perceived usefulness of the statistical methods convention for dispute mediators, and a dispute mediator's intention towards the use of the statistical methods convention for dispute mediating, is mediated by attitude.

- Relationship: (P)Usefulness -----→ is Mediated by Attitude -----→ Intention.
- Empirical Outcome: No Statistically Significant relationship, Attitude does not Indirectly intervene and influence Intention.

The researcher hypothesized that the research results would show a statistically significant relationship. The empirical research results indicated no statistically significant relationship, indicating that attitude does not mediate the relationship between perceived usefulness and behavioral intention in this case. The result was contrary to the theoretical foundations. This may mean that even though dispute mediators may have certain attitudes towards the SMC, if the dispute mediator believes the SMC to be useful, their attitudes about it will not have a statistically significant impact on their intentions to use the SMC. However, research in the literature has shown mixed results on this mediation relationship, and so the result is in line with some of the research published (Liu & Ma, 2024).

Research question number seven inquiry was concerning a dispute mediator's *perceived usefulness* towards the use of the statistical methods convention for dispute mediators; the mediated relationship of perceived ease of use of the statistical methods convention for dispute mediators, and a dispute mediator's attitude towards the use of the statistical methods convention for dispute mediating, as mediated by perceived usefulness.

- Relationship: Ease of Use -----→ mediated by Usefulness -----→ Attitude.

- Empirical Outcome: Statistically Significant relationship, Usefulness does indirectly Intervene and Influence Attitude.

The researcher hypothesized that the research results would show a statistically significant relationship. The empirical research results indicated a statistically significant relationship, indicating that perceived usefulness partially mediates the relationship between perceived ease of use and attitude. The results were also in line with the theoretical foundations (Davis et al., 1989; Park, 2009). The meaning of this result shows, in terms of attitudes towards the SMC, that when dispute mediators find the SMC very useful, they will have more accepting attitudes towards the SMC, in spite of how easy or hard they find the SMC to use. This result was also in line with recent research (Kong et al., 2024).

Summary

The primary concern of Chapter 4 was to address the processing of the collected research data, analysis of the data, results of the statistical computations, and a brief evaluation of the findings. Part of the processing of the collected data included ensuring no participant identifiers were included, and security measures to protect the data. Further processing involved importing the raw data into a statistical software format and setting up variable labels. Then, the data was screened for missing or faulty data, where 38 incomplete cases were removed for a final sample size of 305.

The researcher performed statistical analysis on the finalized dataset with both IBM Statistical Package for the Social Sciences (SPSS) version 29 and SmartPLS 4.1 structural equation modeling software. In terms of assessing the data for validity and reliability, SPSS was used first to identify incomplete cases and then to make checks for normality. The normality

checks included checks for kurtosis, checks for skewness, observation of histograms, and inspection of *P-P* plots. The data was found to be somewhat non-normal.

Reliability and validity assessments of the data were made. Reliability of the variable measures was confirmed by satisfactory Cronbach's alpha coefficients and satisfactory composite reliability calculations. Validity of the data corresponding to the variables was also confirmed by way of the average variance extracted measure, the discriminant validity assessment, and the Bartlett's test of sphericity. All validity measures were satisfactory. Validity assessments were also made for the theoretically based structural model, including the cross-validated predictive ability test (CVPAT), and the Q^2 measure of out-of-sample predictive power. Both of these structural assessments demonstrated a good level of sufficiency.

The results of the statistical analysis included descriptive statistics of the data corresponding to the research variables, such as the mean, standard deviation, and range. Bivariate analysis results included statistically significant Pearson correlation coefficients for all research question variable combinations. Multivariate analysis results began with a check for collinearity, showing no issues, and then the path analysis. The path coefficients for ATT→INT and for SN→INT were not statistically significant. All of the other path coefficients were statistically significant at a probability less than .001.

Finally, hypothesis testing was conducted on two intervening variable hypotheses. Hypothesis *H6* explored whether the attitude variable mediated the relationship between perceived usefulness and intention to use the SMC, and the statistical analysis showed there was no mediation effect. Hypothesis *H7* explored whether the perceived usefulness variable mediated the relationship between perceived ease of use, and attitude towards the SMC. For *H7*, the statistical analysis showed a partial mediation effect by the perceived usefulness variable. The

next chapter, Chapter 5, will cover implications of the findings, recommendations, and conclusions.

Chapter 5: Implications, Recommendations, and Conclusions

The problem to be addressed in this study was that dispute mediators' use of the proactive Statistical Methods Convention (SMC) is not widespread, and met with resistance in the dispute mediation process, even though it had been demonstrated that SMC can increase efficiency and provide improvement. The purpose of this quantitative correlational design research was to better understand the dispute mediator's perspective and gain information on predicting the behavioral intentions of dispute mediators regarding the use of the statistical methods convention for dispute mediators by way of the theoretical framework of the theory of planned behavior (TPB) extended by the technology acceptance model (TAM) constructs. This chapter of the research project addresses the implications of the study, recommendations, and final conclusions. Implications discussed include the logical conclusions derived from the hypotheses, factors impacting the interpretation of the results, and the relation of the results to the study problem. Recommendations discussed include application of outcomes to theory and practice, and suggestions for future research.

The implications highlight the conclusions from hypothesized results, and consider to what extent the independent factors of attitude, subjective norms, perceived behavioral control, perceived usefulness, and perceived ease of use, and the relationship to intention to use the SMC, influence those results. Going forward, recommendations highlight future research that may be conducted to expand the research topic in theory, practice, and policy. Dispute mediation is an integral part of the alternative dispute resolution process. As an alliance, the SMC strategically aligns the entire dispute mediation integrated Alternative Dispute Resolution (ADR) complex. SMC strategic alliance with dispute mediators and the integrated ADR process positions SMC by association to become an assisting technological neutral.

The limitations of this study included time, resources, and effective data. The actual limitations in this research study aligned with the projected limitations. The research study was a short two-month study, which was a time limitation. The study had limited monetary resources, a resource limitation. The research on statistical methods convention used by dispute mediators in practice had scant research performed in the literature, an effective data limitation.

The delimitations of this study included theory as a framework, data gathering, and data analysis. The actual delimitations in this research study aligned with the projected delimitations. The study used the extended Theory of Planned Behavior to guide the research. The evidence gathered was by way of a survey questionnaire. The data was analyzed by correlational techniques and structural equation modelling.

Implications

RQ1/ H1_a

The inquiry about the relationship between a dispute mediator's attitude towards the use of the statistical methods convention and the dispute mediator's intention to use the statistical methods convention for dispute mediating in practice was found to be statistically significant. Such statistical significance indicates that belief-based attitude had a large effect, accounting for over 41% of the variance, upon the behavioral intention of the dispute mediator. The research study concerning the relationship between belief-based attitude and behavioral intention is important because, in professional practice and organizational leadership, strategic decision making by dispute mediators, to procedural guidelines or substantive form, may be beneficially advanced by using the SMC for all participants. The dispute mediator's attitude based on preconceived notions is a primary factor that strongly contributes to the dispute mediator's intention to use the SMC. Such a significant relationship holds continuously true to the current

time, that attitude is a factor that does significantly drive the behavioral intention to use the SCM in the practice of dispute mediation, and such populous outcomes are generalizable to greater populations. The findings did add support to other research efforts that found belief-based attitude profoundly influenced the behavioral intention to use (Ikhsan et al., 2025; Jiao & Cao, 2024; Nurtanto et al., 2025).

RQ2/H2_a

The inquiry about the relationship between a dispute mediator's subjective norms that influence the use of the statistical methods convention and the dispute mediator's intention to use the statistical methods convention for dispute mediating in practice was found to be statistically significant. Such statistical significance indicates that belief-based subjective norms had a large effect, accounting for over 42% of the variance, upon the behavioral intention of the dispute mediator. The research study concerning the relationship between belief-based subjective norms and behavioral intention is important. Because, in professional practice and organizational leadership, strategic decision making by dispute mediators is collectively influenced by family, friends, and workplace others. Modernly, many of those significant others may be impacted by the rapid advancement of technological innovation, creating a basis to encourage the use of the statistical methods convention in the dispute mediation practice. The subjective norm's influencing effect is a statistically significant influencing factor, which strongly contributes to the dispute mediator's intention to use the SMC. The findings did add support to other research efforts that found belief-based subjective norms did profoundly influence the behavioral intention to use (Ikhsan et al., 2025; Jiao & Cao, 2024; Lee et al., 2018).

RQ3/H3_a

The inquiry about the relationship between a dispute mediator's perceived behavioral control that influences the use of the statistical methods convention and the dispute mediator's intention to use the statistical methods convention for dispute mediating in practice was found to be statistically significant. Such statistical significance indicates that belief-based perceived behavioral control had a large effect, accounting for over 53% of the variance, upon the behavioral intention of the dispute mediator. The research study concerning the relationship between belief-based perceived behavioral control and behavioral intention is important. Because factors of knowledge, skills, training, and experience have a positively promoting effect upon an individual's perception of ability, otherwise known as the "can I do it" factor, which facilitates increasing the likelihood of using the statistical methods convention or impede its performance in the context of dispute mediation practice and organizational leadership. Further, the far-reaching impact of perceived behavioral control effect moderates both attitude and subjective norms (Ajzen, 1991). A comparative review of the effect values: attitude has a 41% effect, subjective norms a 43% effect, and perceived behavioral control a 53% effect. The dispute mediator's perceived behavioral control influencing effect is the most statistically significant influencing factor, which strongly contributes to the dispute mediator's intention to use the SMC. The findings did add support to other research efforts that found belief-based perceived behavioral control did profoundly influence the behavioral intention to use (Jiao & Cao, 2024; Ngafeeson & Gautam, 2021; Wang et al., 2024).

RQ4/H4_a

The inquiry about the relationship between a dispute mediator's perceived usefulness towards the use of the statistical methods convention and the dispute mediator's intention to use

the statistical methods convention for dispute mediating in practice was found to be statistically significant. Such statistical significance indicates that perceived usefulness had a large effect, accounting for over 55% of the variance, upon the behavioral intention of the dispute mediator. The research study concerning the relationship between perceived usefulness and behavioral intention is important. Because, within the context of dispute mediation and organizational leadership, factors of service utility and product utility weigh in heavily in favor of using the statistical methods convention. The findings did add support to other research efforts that found perceived usefulness did profoundly influence the behavioral intention to use (Kelly et al., 2023; Sukma et al., 2023; Toros et al., 2024).

RQ5/H5_a

The inquiry about the relationship between a dispute mediator's perceived ease of use towards the use of the statistical methods convention and the dispute mediator's intention to use the statistical methods convention for dispute mediating in practice was found to be statistically significant. Such statistical significance indicates that perceived ease of use had a large effect, accounting for 49% of the variance, upon the behavioral intention of the dispute mediator to use the statistical methods convention. Part of the unaccounted-for 51% may be attributed to a motivational aspect regarding the statistical methods convention. The research study concerning the relationship between perceived ease of use and behavioral intention is important. Because, within the context of dispute mediation and organizational leadership, factors of technological user friendliness, technological adaptability, clarity in form, and substance weigh in heavily in favor of using the statistical methods convention. The findings did add support to other research efforts that found perceived ease of use did profoundly influence the behavioral intention to use (Humida et al., 2022; Na et al., 2023; Sadriwala & Sadriwala, 2022).

RQ6/H6_a

The inquiry about the intervention of the dispute mediator's attitude towards the usefulness of the SMC, on the relationship between perceived usefulness of the SMC and intention to use the SMC in practice, was found to be statistically insignificant. Whether they had a bad attitude or a good attitude towards the SMC, the usefulness influence of the SMC appears to override in this case, and usefulness becomes the dominant influencer on the intention to use the SMC. There was no statistically significant intervention, by a dispute mediator's attitude, on the relationship between a dispute mediator's perceived usefulness of the SMC, and a dispute mediator's intention to use the SMC, with an indirect effect of 0.04. The research study concerning the intervention of attitude between the relationship of perceived usefulness and intention to use the SMC is important. Because, within the context of dispute mediation and organizational leadership, perceptions of usefulness become a more important factor to be concerned with, rather than the dispute mediator's attitude toward the SMC. The findings did not add support to other research efforts, because prior research found that attitude intervenes and influences the behavioral intention to use (Davis et al., 1989; Liu & Ma, 2024).

RQ7/H7_a

The inquiry about the intervention of the dispute mediator's perceived usefulness of the SMC, on the relationship between perceived ease of use of the SMC and attitudes toward the SMC, was found to be statistically significant. The dispute mediators' feeling of the SMC to be useful was meaningful and a dominant influencer on forming attitudes towards the SMC, whether the dispute mediators perceived that the SMC was easy to use or not easy to use. For example, even if a dispute mediator thought that the SMC was difficult to use, if they believed that it was very useful, they would have a more positive attitude towards the SMC.

There was a statistically significant intervention, by a dispute mediator's perceived usefulness, on the relationship between a dispute mediator's perceived ease of use of the SMC, and a dispute mediator's attitude toward the use of the SMC, with an indirect effect of 0.28. The research study concerning the intervention of perceived usefulness between the relationship of ease of use and attitude to use the SMC is important. Because, within the context of dispute mediation and organizational leadership, perceptions of usefulness are an important consideration that override perceptions of ease of use in how dispute mediators form their attitude about the SMC. The findings did add support to other research efforts, because prior research did find that perceived usefulness intervenes and influences the relationship between perceived ease of use and attitude towards the SMC (Davis et al., 1989; Kong et al., 2024).

Recommendations for Practice

In terms of recommendations for practice, statistics have been expanded with analytical statistical methods, and such methods have been augmented with conventions that have advanced the theoretical welfare of a variety of distinctive populations, such as the dispute mediator population. The modern convention of digital infrastructure, artificial intelligence, augmented reality, and virtual reality are technological innovations that help as an additional neutral in the dispute mediation process.

The statistical methods convention constitutes a para-technological mediator neutral to the dispute mediator in the practice of mediation. In formulating new statistical methods convention programs for dispute mediators to use in organizations, considerations should be made to ensure that the product appears easy to use, with supporting educational materials for training the dispute mediators. Also, conduct seminars to demonstrate the technological useful characteristics of the statistical methods convention, which highlights how the SMC can assist

the dispute mediator as a para-technological neutral in the dispute mediation process. Lastly, practitioners need to ensure that the statistical methods convention does provide a platform where the distinctive rules of confidentiality are incorporated in all statistical methods convention protocols used during the dispute mediation process.

An additional recommendation, dispute mediation has developed and expanded due to the gold-rush expansion of the integrated alliance of digital infrastructure, AI, AR, and VR. However, additionally, the alternative dispute resolution (ADR) process has also rapidly expanded, pushing forward the popularity and use of dispute mediation. The alternative dispute resolution system has led the way to assist disputants in resolving disputes by way of neutral dispute mediator administrators (neutral) to guide and support disputing participants. As a neutral assistant in the ADR process, it is important for dispute mediators to understand the technologically evolving presence of the statistical methods convention, to beneficially advance the dispute mediation practice. This SMC awareness will build favorable attitudes towards the SMC and bolster behavioral intentions to use the SMC in practice. Understanding, knowledge, and practice will prompt favorable attitudes concerning SMC, consequently bolstering the dispute mediator's behavioral intentions to use the SMC in practice. As this current study was brief, it is recommended that more research should be conducted to investigate to what extent do dispute mediators utilize the integrated alliance of digital infrastructure, AI, AR, and VR systems.

Another recommendation, uniquely, dispute mediation is distinctive and differs from other alternative dispute resolution processes, due to its use of the Self-Determination theoretical perspective as the guiding operative theory for disputants to follow in the dispute mediation process. It is recommended that, since there is a need to make aware and educate dispute mediators concerning the use of the self-determination perspective, framework, and model, more

research should be conducted to investigate to what extent is the theory of self-determination is used by those practicing dispute mediators.

Recommendations for Future Research

In terms of the Theory of Planned Behavior, the results of this research study indicated that attitude and subjective norms were less of a factor. Perhaps a different type of hybrid research model could be used in future research and be based more on the expanded technology acceptance model, with additional constructs such as awareness of the statistical methods convention and knowledge of the statistical methods convention. Part of the unaccounted-for variance may be attributed to a motivational aspect regarding the statistical methods convention. It is recommended that more research be conducted to explore the role of motivation concerning use of the integrated alliance of statistical methods, digital infrastructure, AI, AR, and VR, which can strategically benefit the dispute mediation process. For example, since dispute mediation is based upon the theory of self-determination, having specific guidelines for the type of environment disputants should meet and confer in, future research should investigate those effective simulated environments created by the integrated alliance of digital infrastructure, AI, AR, and VR systems.

This ideal should also be informed by the increasing technological innovation associated with the development of the statistical methods convention. On the other hand, for example in five years' time when the statistical methods convention is further developed and the usage is more prolific, the variable of subjective norms might become important as more family members, friends, and business associates, might be using the statistical methods convention for dispute mediation, and have an influence on other potential users. It is recommended that future researchers investigate to find if subjective norms become an important factor.

In terms of policy, the statistical methods convention, ethical consideration may become more critical, and policy makers will need to keep an eye on the development of the SMC for such issues as privacy, confidentiality, and disclosure mandates. It is recommended that policymakers monitor the development of the SMC for dispute mediation for these issues and develop appropriate policy as needed, especially in the area of confidentiality. For example, in the state of California, the California Rules of Court mandate that all dispute mediation proceedings be conducted in accordance the highest standards of confidentiality (CRC rule 1.6; CRC rule 3.853; CFC § 3177). New technologies in integrated digital infrastructure, AI, AR, and VR are often creating unanticipated ethical issues, which should be addressed.

Conclusions

This research study looked at the topic of dispute mediation in the context of organizational leadership and explored how dispute mediators may intend to use the technological innovation of the statistical methods convention in dispute resolution processes. An extensive literature review was conducted to better understand the topic area and issues. A hybrid research model with the theory of planned behavior as a basis, and technology acceptance model constructs incorporated, served as a guiding framework for the research study. A quantitative research approach was followed, along with statistical analysis, including correlational analysis and structural equation modeling.

The problem to be addressed in this study was that dispute mediators' use of the proactive statistical methods convention is not widespread, and met with resistance in the dispute mediation process, even though it had been demonstrated that statistical methods convention can increase efficiency and provide improvement. The importance of the research study is that the findings can inform organizational leaders regarding ways to improve dispute resolution

processes within organizations and between organizations. Potential improvements include greater efficiency and higher-quality dispute resolution processes, which can lead to higher-performing organizations overall and a more desirable organizational environment.

Organizational leaders may improve their dispute resolution processes by getting dispute mediation personnel on board with the statistical methods convention in several ways. Firstly, organizational leaders can promote the usage of the statistical methods convention by demonstrating how easy it can be to use, and how beneficially useful it can be to the dispute resolution process. This point is becoming easier to make as the digital infrastructure, AI, AR, and VR system innovations are developing rapidly. Secondly, organizational leaders can promote usage of the statistical methods convention by emphasizing that the technology can be within the control of the dispute resolution personnel. Example given is in the state of California, the California Rules of Court govern dispute mediator practice along with the type and kind of statistical methods convention that can be used in practice (CRC rule 3.853). Finally, even though some personnel may still feel the statistical methods convention is challenging to use, an emphasis on the usefulness of the statistical methods convention can help increase positive attitudes towards the statistical methods convention, helping pave the way for greater enthusiasm to use the statistical methods convention for dispute mediation. These points can help guide the professional practice of dispute mediation, as well as the academic researchers exploring the topic.

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Appendix A

Key Terms and Search Strategy for Literature Review

Key Terms	Logic Searches	Databases Searched
Organizational Dispute	Artificial Intelligence AND Dispute Resolution	NU NavigatorSearch
Dispute Mediation	Theory of Planned Behavior AND Artificial Intelligence	ProQuest
Dispute Resolution	Technology Acceptance Model AND Artificial Intelligence	EBSCO Business Search
Conflict Resolution	Proactive AND Dispute Resolution	Wiley Online Library
Intervention	Reactive AND Dispute Resolution	Springer Link
Data Analytics	Attitude AND Artificial Intelligence	Academic Search Complete
Artificial Intelligence	Ease of Use AND Artificial Intelligence	Science Direct
Theory of Planned Behavior	Intention AND Artificial Intelligence	Taylor & Francis Online
Technology Acceptance Model	Organizations AND Internal Dispute	Business Source Complete
Online Dispute Resolution (ODR)	Data Analytics AND Intention	Gale Database
Virtues of ODR	Statistics AND Dispute Resolution	Google Scholar
Problems with Dispute Mediation	Subjective Norms AND Artificial Intelligence	
Intention to use a Fourth Party		
Dispute Resolution Within Organizations		

Appendix B

Survey Instrument

Adjust the slider scale to the desired level of agreement then press ok:

- 1.) The statistical methods convention offers good solutions for many dispute mediation tasks.

Adjust the slider scale to the desired level of agreement then press ok:

Strongly Disagree Strongly Agree



- 2.) I have a good feeling when I think about the use of the statistical methods convention in daily dispute mediation work.

Adjust the slider scale to the desired level of agreement then press ok:

Strongly Disagree Strongly Agree



- 3.) If I have to complete an important dispute mediation task, I would prefer to incorporate technology such as the statistical methods convention.

Adjust the slider scale to the desired level of agreement then press ok:

Strongly Disagree Strongly Agree



- 4.) People important to me would support my usage of the statistical methods convention in dispute mediation.

Adjust the slider scale to the desired level of agreement then press ok:

Strongly Disagree Strongly Agree



5.) People who influence me think that I should use the statistical methods convention in dispute mediation.

Adjust the slider scale to the desired level of agreement then press ok:

Strongly Disagree Strongly Agree



6.) People whose opinions I value prefer that I should use the statistical methods convention in dispute mediation.

Adjust the slider scale to the desired level of agreement then press ok:

Strongly Disagree Strongly Agree



7.) The usage of the statistical methods convention in dispute mediation would be entirely within my control.

Adjust the slider scale to the desired level of agreement then press ok:

Strongly Disagree Strongly Agree



8.) I would have the resources, knowledge, and skill ability to use the statistical methods convention in dispute mediation.

Adjust the slider scale to the desired level of agreement then press ok:

Strongly Disagree Strongly Agree



9.) I would be able to use the statistical methods convention effectively for dispute mediation.

Adjust the slider scale to the desired level of agreement then press ok:

Strongly Disagree Strongly Agree



10.) The statistical methods convention would improve my dispute mediation performance.

Adjust the slider scale to the desired level of agreement then press ok:

Strongly Disagree Strongly Agree



11.) The statistical methods convention would increase dispute mediation productivity.

Adjust the slider scale to the desired level of agreement then press ok:

Strongly Disagree Strongly Agree



12.) The statistical methods convention could make it easier to administrate the dispute mediation process.

Adjust the slider scale to the desired level of agreement then press ok:

Strongly Disagree Strongly Agree



13.) I find that the statistical methods convention would be easy to use for dispute mediation.

Adjust the slider scale to the desired level of agreement then press ok:

Strongly Disagree

Strongly Agree

A horizontal slider scale with a central knob. The scale is a thin blue line with rounded ends. A white circular knob with a blue outline is positioned exactly in the middle of the scale.

14.) Learning how to use the statistical methods convention for dispute mediation would be easy for me.

Adjust the slider scale to the desired level of agreement then press ok:

Strongly Disagree

Strongly Agree

A horizontal slider scale with a central knob. The scale is a thin blue line with rounded ends. A white circular knob with a blue outline is positioned exactly in the middle of the scale.

15.) It is easy to become skillful at using the statistical methods convention for dispute mediation.

Adjust the slider scale to the desired level of agreement then press ok:

Strongly Disagree

Strongly Agree

A horizontal slider scale with a central knob. The scale is a thin blue line with rounded ends. A white circular knob with a blue outline is positioned exactly in the middle of the scale.

16.) I would plan to use the statistical methods convention for dispute mediation to help me learn and practice now and in the future.

Adjust the slider scale to the desired level of agreement then press ok:

Strongly Disagree

Strongly Agree

A horizontal slider scale with a central knob. The scale is a thin blue line with rounded ends. A white circular knob with a blue outline is positioned exactly in the middle of the scale.

17). I would continue to apply the statistical methods convention for dispute mediation technology to solve problems I encounter in my practice.

Adjust the slider scale to the desired level of agreement then press ok:

Strongly Disagree Strongly Agree

A horizontal slider scale consisting of a rounded rectangular track. A circular handle is positioned exactly in the center of the track.

18). I will continue to keep an eye on the progress of the statistical methods convention for dispute mediation related technologies.

Adjust the slider scale to the desired level of agreement then press ok:

Strongly Disagree Strongly Agree

A horizontal slider scale consisting of a rounded rectangular track. A circular handle is positioned exactly in the center of the track.

19). I would regularly update the latest statistical methods convention for dispute mediation related applications.

Adjust the slider scale to the desired level of agreement then press ok:

Strongly Disagree Strongly Agree

A horizontal slider scale consisting of a rounded rectangular track. A circular handle is positioned exactly in the center of the track.

Appendix C

Participant Consent Form

Survey on Use of the SMC for Dispute Mediators Consent to Participate in a Research Study

Online Anonymous Survey/Questionnaire Consent

Hello,

My name is Sheila E. Olsen, and I am a doctoral student at National University. I am conducting an online survey to understand the statistical methods convention, a mechanism that includes; statistical analytics, big data analytics, artificial intelligence, augmented reality, and virtual reality, which is used on online platforms to assist mediators in the dispute mediation process. In order to participate, survey takers must be located in the United States, be eighteen years of age or older, and be a dispute mediator.

The following survey questionnaire includes questions such as: (a) "The statistical methods convention offers good solutions for many dispute mediation tasks;" (b) "People who influence me think that I should use the statistical methods convention in dispute mediation;" and (c) "The statistical methods convention would improve my dispute mediation performance. It will take approximately four minutes of your time to complete the survey.

Your participation in this study is voluntary. If you decide to participate, your responses will be anonymous - that is, recorded without any identifying information that is linked to you. If you have any questions regarding this survey, please contact me at National University email: s.olsen9043@o365.ncu.edu or Phone: (916) 617-6426.

If you have any questions regarding your rights as a human subject and participant in this study, or to report research-related problems, you may email the National University IRB at irb@nu.edu.

By clicking the next button and completing the survey you indicate that you have consented to participate in this research. If you do not want to participate, please close the browser

Appendix D

Kurtosis Assessment Statistics for Variable Measures

Variable Measure	Kurtosis Statistic	Standard Error	z-Score
ATT1	.785	.278	2.82
ATT2	.550	.278	1.98
ATT3	.425	.278	1.53
SN4	.535	.278	1.92
SN5	.056	.278	0.20
SN6	.064	.278	0.23
PBC7	.402	.278	1.45
PBC8	.082	.278	0.29
PBC9	.666	.278	2.40
PU10	.338	.278	1.22
PU11	.531	.278	1.91
PU12	.634	.278	2.28
EOU13	-.204	.278	-0.73
EOU14	.068	.278	0.24
EOU15	-.179	.278	-0.64
INT16	.074	.278	0.27
INT17	.386	.278	1.39
INT18	1.000	.278	3.60
INT19	.555	.278	2.00

Appendix E

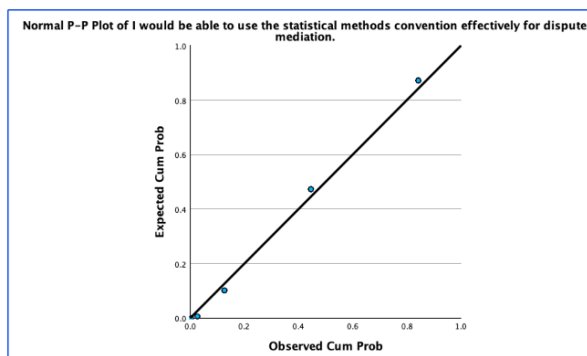
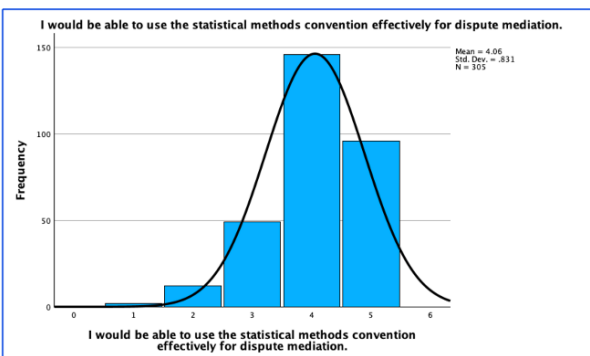
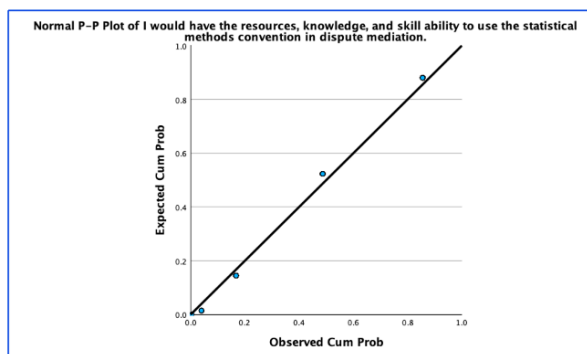
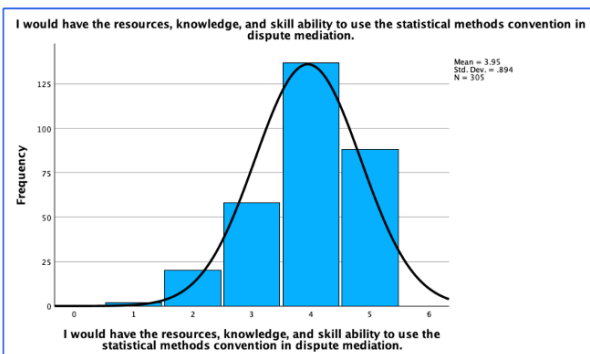
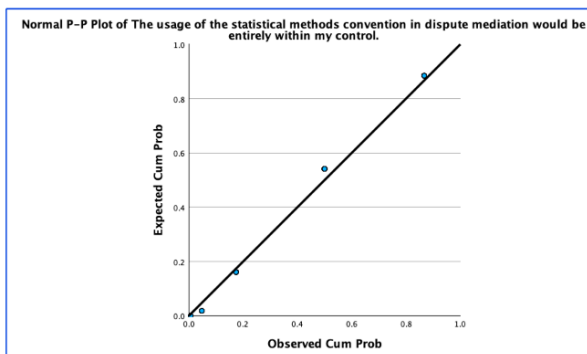
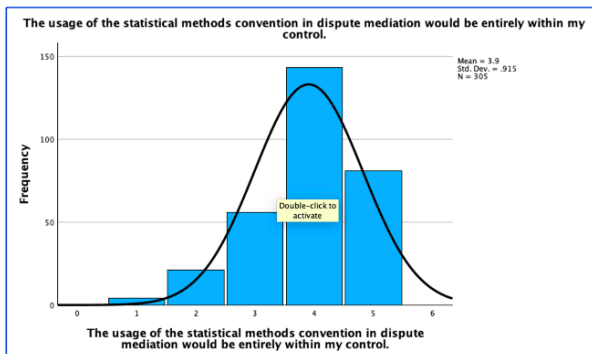
Skewness Assessment Statistics for Variable Measures

Variable Measure	Skewness Statistic	Standard Error	z-Score
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ATT2	-.741	.140	-2.67
ATT3	-.861	.140	-3.10
SN4	-.877	.140	-3.15
SN5	-.690	.140	-2.48
SN6	-.697	.140	-2.51
PBC7	-.772	.140	-2.78
PBC8	-.674	.140	-2.42
PBC9	-.797	.140	-2.87
PU10	-.709	.140	-2.55
PU11	-.830	.140	-2.99
PU12	-.794	.140	-2.86
EOU13	-.596	.140	-2.14
EOU14	-.754	.140	-2.71
EOU15	-.638	.140	-2.29
INT16	-.704	.140	-2.53
INT17	-.850	.140	-3.06
INT18	-.955	.140	-3.44
INT19	-.828	.140	-2.98

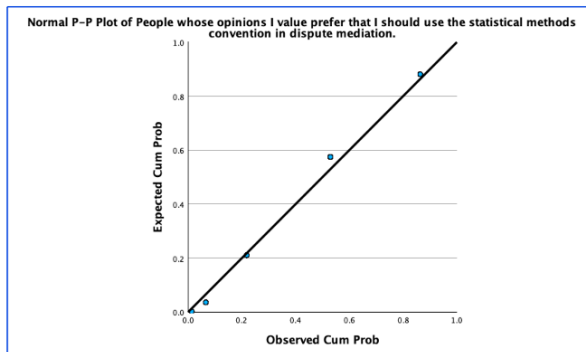
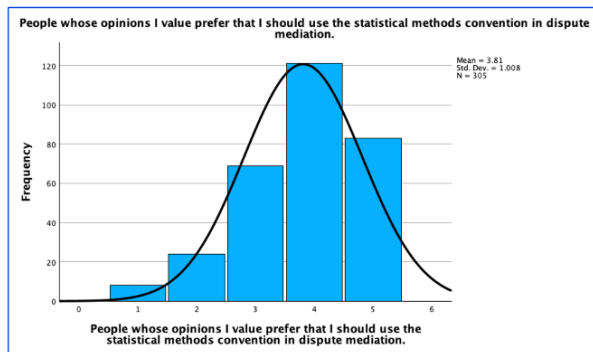
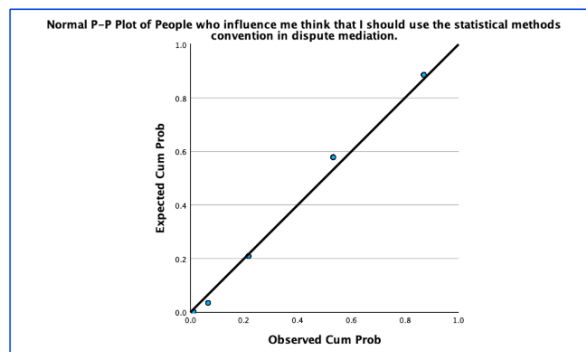
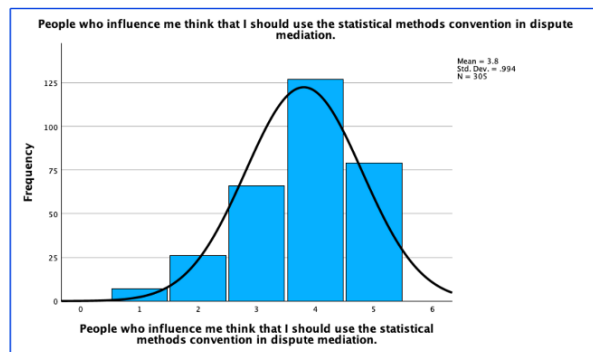
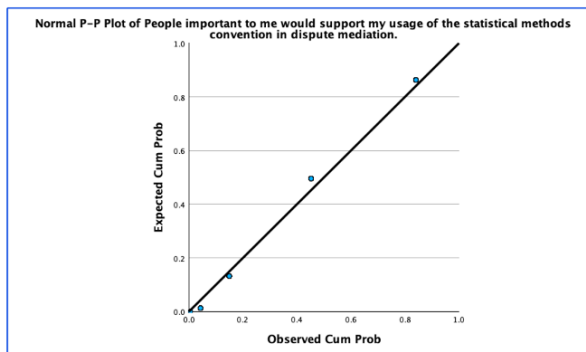
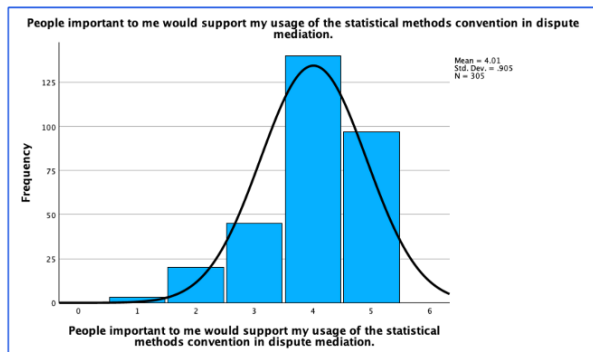
Appendix F

Histograms and *P-P* Plots for Normality Assessment

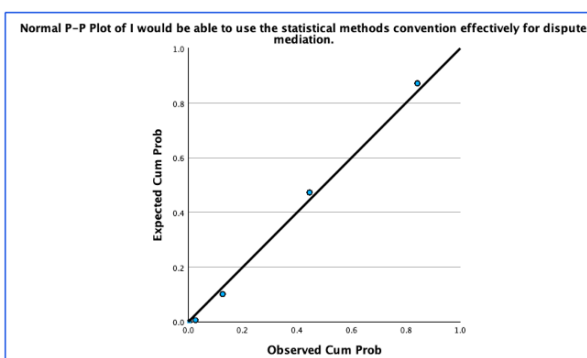
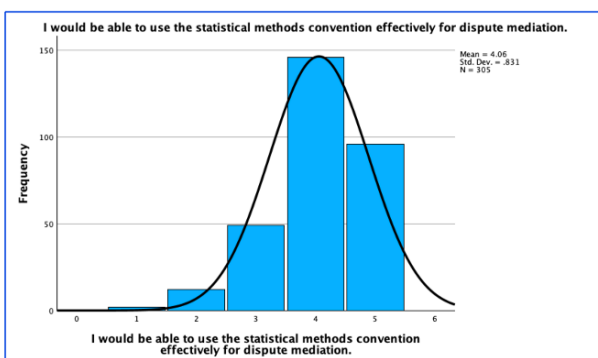
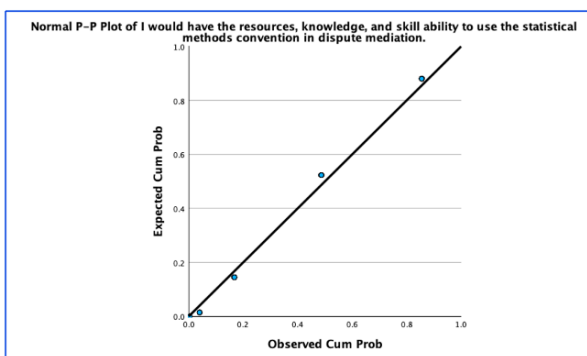
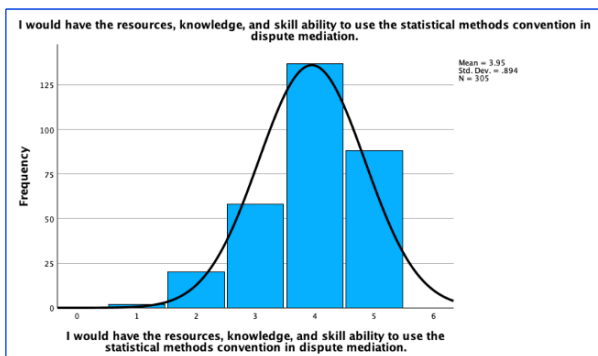
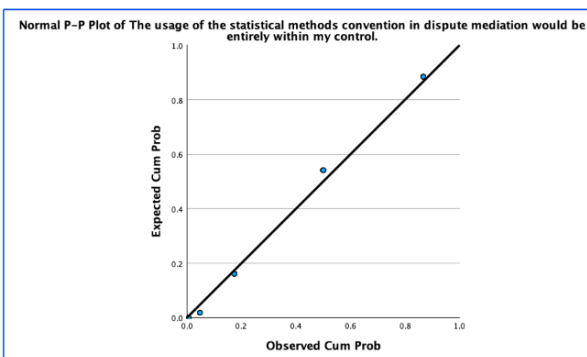
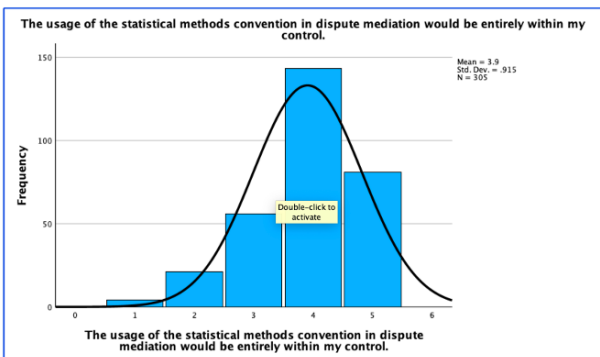
Graphic Normality Assessment for Attitude Measures



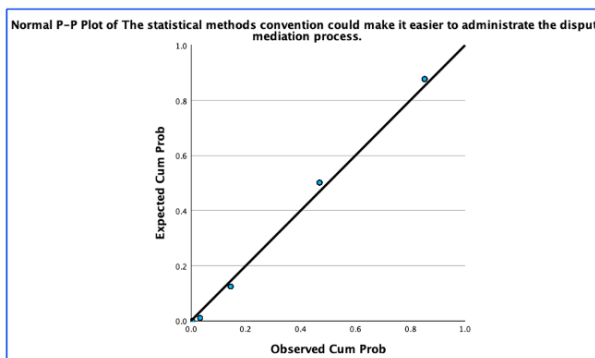
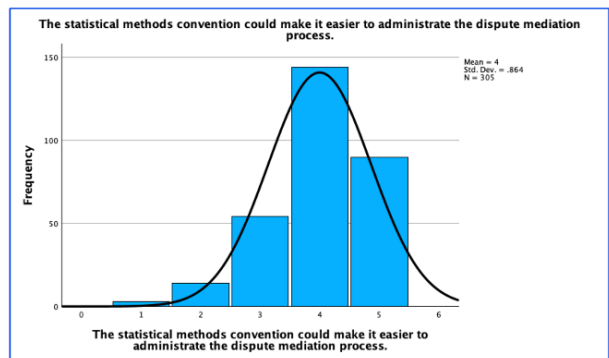
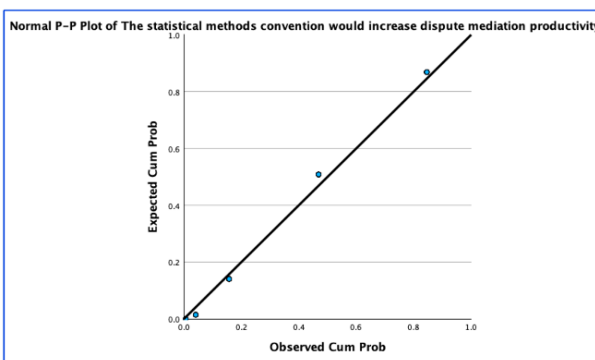
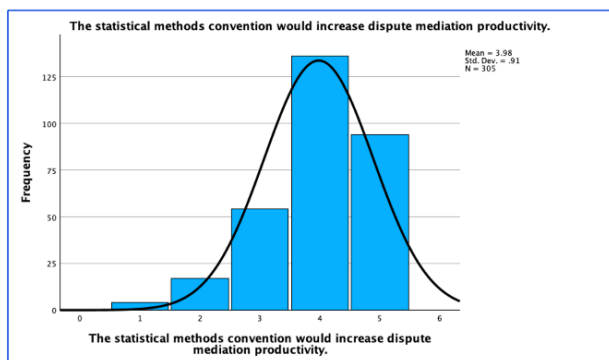
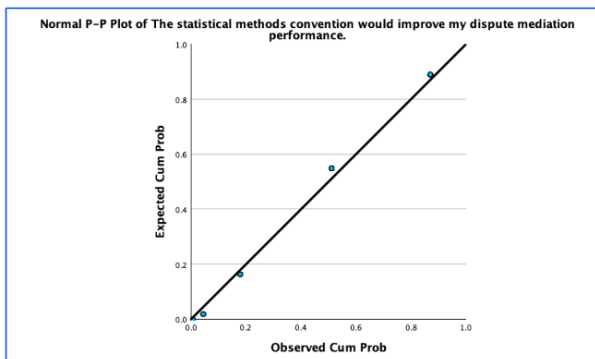
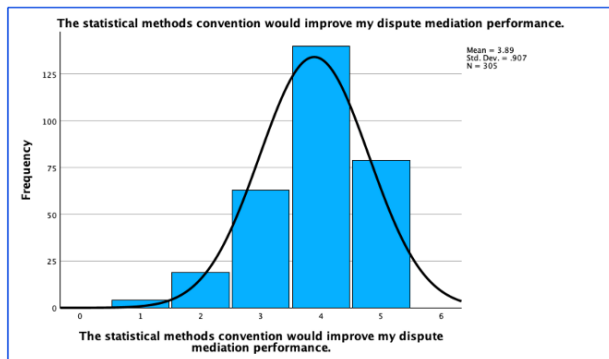
Graphic Normality Assessment for Subjective Norm Measures



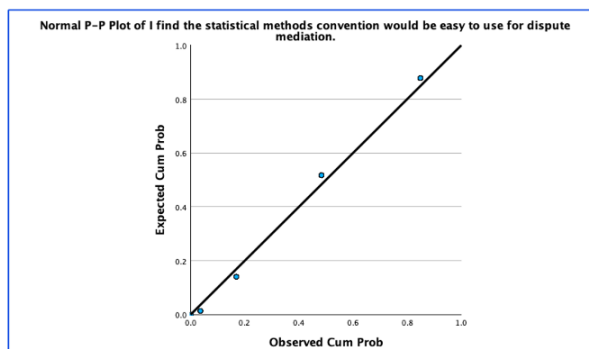
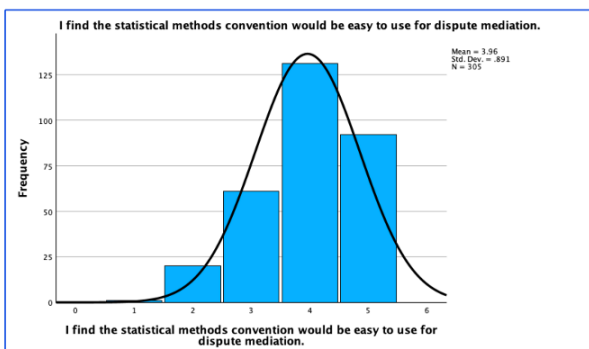
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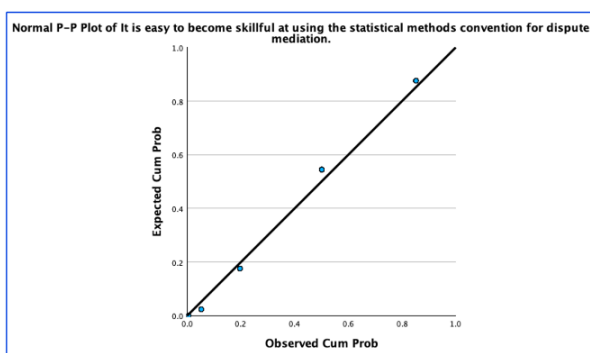
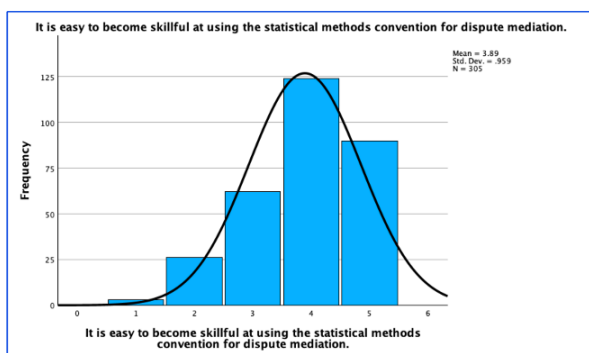
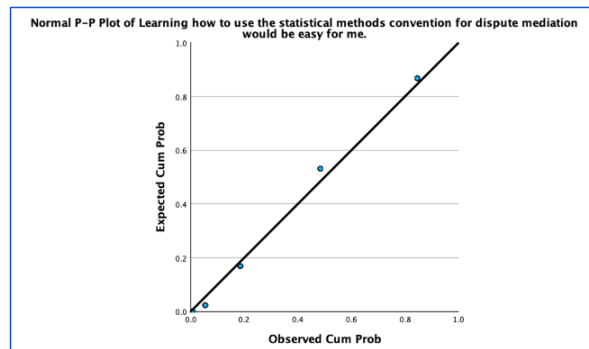
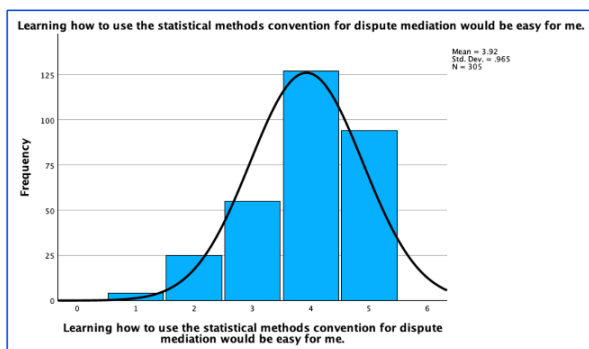
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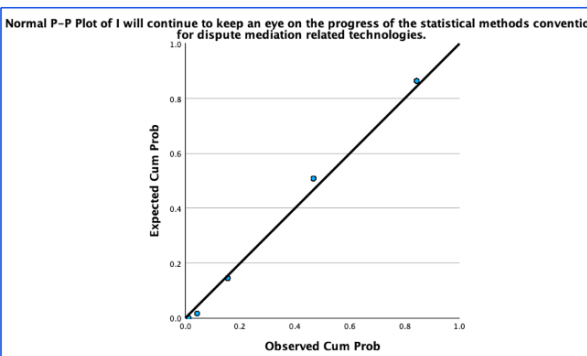
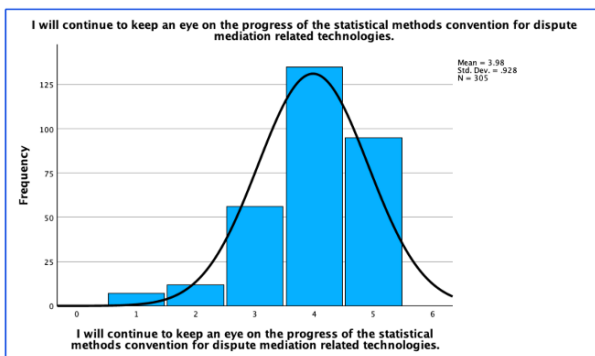
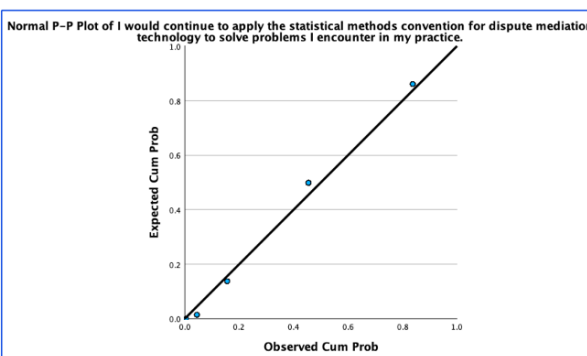
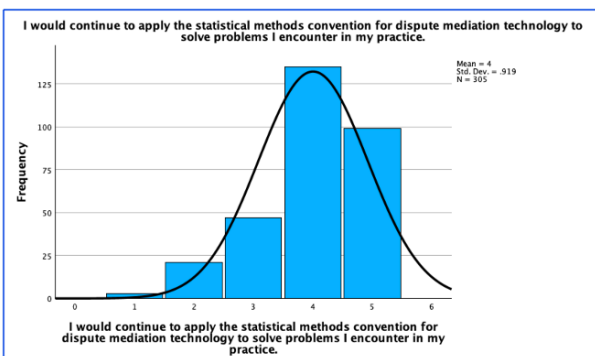
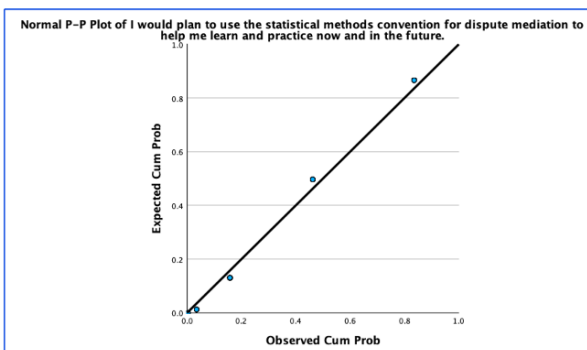
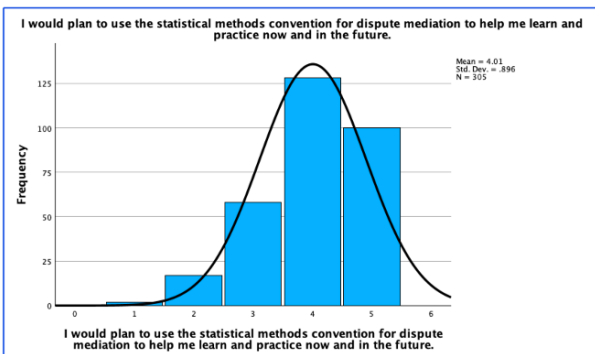
Graphic Normality Assessment for Ease of Use Measures

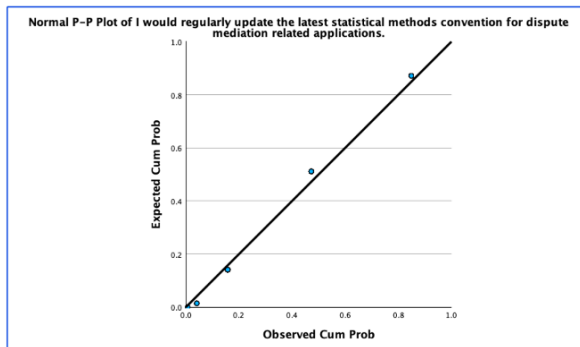
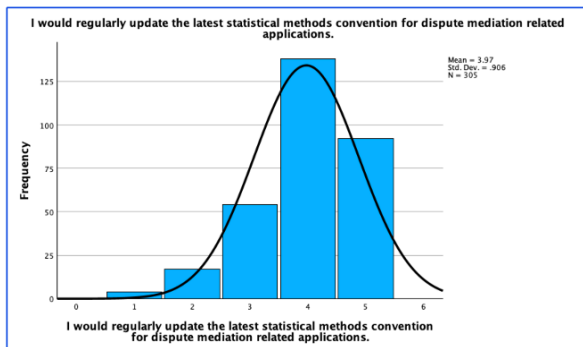


Title]



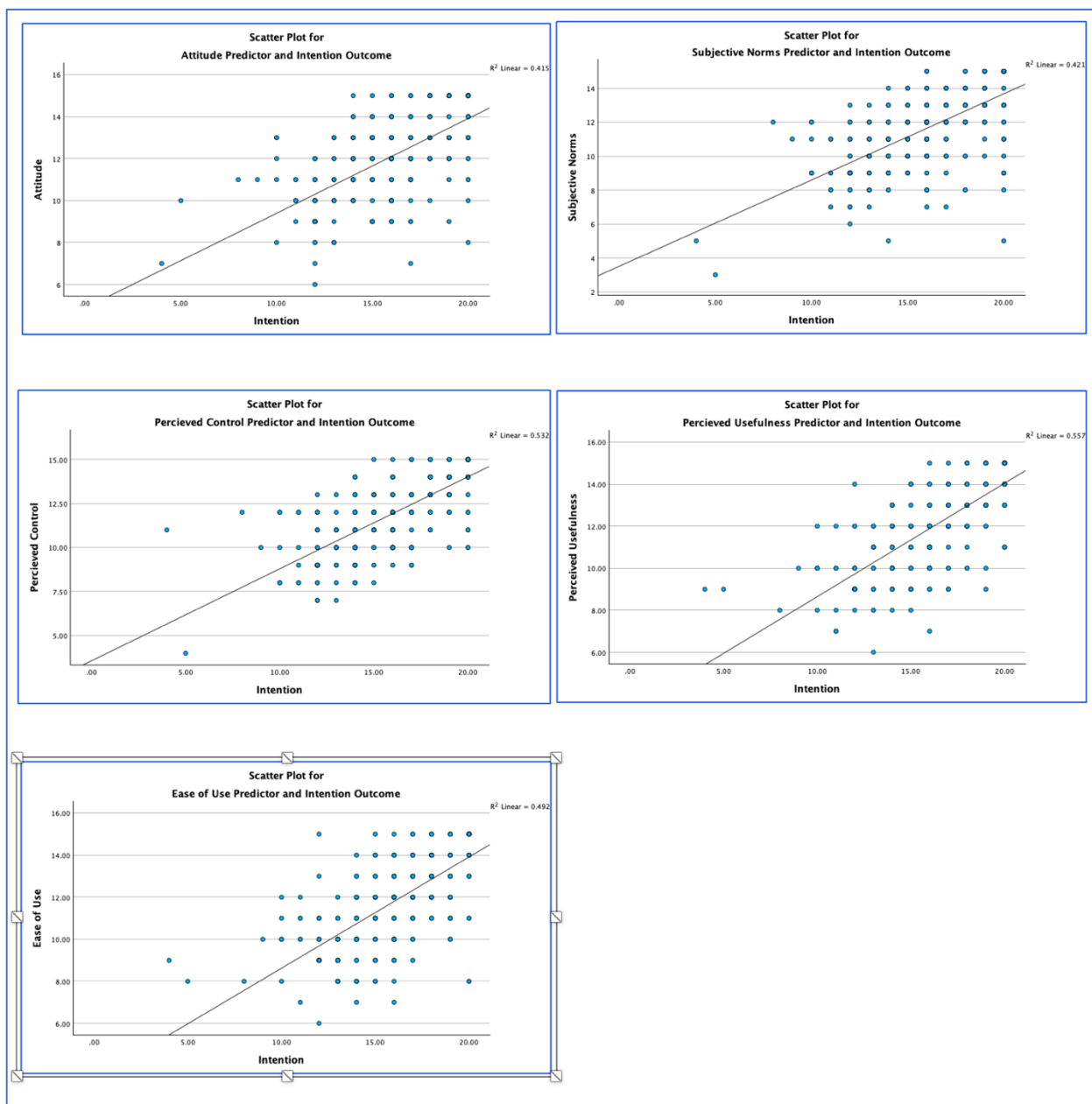
Graphic Normality Assessment for Intention Measures





Appendix G

Summary of Scatterplot Graphs for Bivariate Analysis (n = 305)



Note. Graphs generated with SPSS ver. 29.

Appendix H

IRB Approval Letter (Pages 1 – 3)

5/12/25, 5:10 PM

Mail - Sheila Olsen - Outlook



IRB-FY24-25-919 - Initial: Exempt from Further Review

From do-not-reply@cayuse.com <do-not-reply@cayuse.com>

Date Mon 5/12/2025 10:42 AM

To Sheila Olsen <S.Olsen9043@o365.ncu.edu>;
skimmel@nu.edu <skimmel@nu.edu>

You don't often get email from do-not-reply@cayuse.com. [Learn why this is important](#)



**9388 Lightwave Ave.
San Diego, CA 92123
irb@nu.edu**

Notice of Exemption

5/12/25, 5:10 PM

Mail - Sheila Olsen - Outlook

May 12, 2025

To: Sheila Olsen

Project Title: Survey of Dispute Mediator's Intention to Use the Statistical Methods Convention in Mediation Process: A Correlational Study

NU IRB Number: IRB-FY24-25-919

Determination: Exempt from further review 45 CFR 46.101 Category 2.(i). Research that only includes interactions involving educational tests (cognitive, diagnostic, aptitude, achievement), survey procedures, interview procedures, or observation of public behavior (including visual or auditory recording) if at least one of the following criteria is met: The information obtained is recorded by the investigator in such a manner that the identity of the human subjects cannot readily be ascertained, directly or through identifiers linked to the subjects;

Status: Active - Research activities may begin as of May 12, 2025

Dear Sheila Olsen:

The study referenced above has been reviewed by the National University IRB. The IRB has determined your research is exempt from further review under 45 CFR 46.104, which means you will not need to renew your

5/12/25, 5:10 PM

Mail - Sheila Olsen - Outlook

study and may begin your study effective immediately. However, if you find the need to change your study in any way, you will need to submit a modification to the IRB prior to implementing the changes. This will allow the IRB to determine whether or not the study still meets exemption criteria.

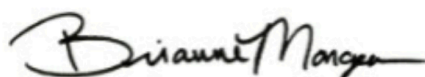
Please review your Post Approval Responsibilities here: [Approved Documents Guidelines](#)

For any questions regarding your protocol, please reach out to the IRB at irb@nu.edu.

Sincerely,



Dr. Joseph Marron, IRB Chair



Dr. Brianne Mongeon, Director, HRPP & IRB



Jenessa Eberhardt, Associate Director, HRPP & IRB