Construct development and measurement of indecisiveness

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Abstract

Purpose – The current study aims to aid in the theoretical development of the indecisiveness construct, create a definition of indecisiveness that reflects current research, and differentiate indecisiveness from other constructs in the field. An indecisiveness scale with positive psychometric properties is developed to measure the construct.

Design/methodology/approach – A total of 578 undergraduate participants answered an open ended question inquiring about a “big” decision they were facing in their life. Participants completed questionnaires on indecisiveness and decision-making strategies.

Findings – Of the 578 total participants who completed the study, 465 (approximately 81 percent) stated that they felt indecisive with regard to their “big” decision. While researchers may be hesitant to study indecisiveness because the phenomenon is thought to be rare, the current study indicates that the presumed anomaly may exist more often than the literature reflects. What’s more, the widespread occurrence of indecisiveness speaks the importance of studying the phenomenon. Results also suggest strong support for using the indecisiveness scale, with psychometric tests finding convergent validity with emotion-focused decision-making strategies and divergent validity with logic-focused strategies.

Research limitations/implications – Limitations include using a sample of undergraduate students to initially test the indecisiveness scale.

Practical implications – With a solid construct definition and psychometrically sound measurement instrument, this paper hopes to encourage future research on indecisiveness and its role in the decision-making process. This work is especially critical in the upper echelons of organizations, where indecisiveness can affect millions of lives and cost billions of dollars.

Originality/value – Research studying indecisiveness is sparse at best, and the need to study the construct has been consistently overlooked in the literature. This study is the first of its kind to develop a solid definition of indecisiveness as it exists in the decision-making process and an accompanying measurement instrument with positive psychometric qualities.

Keywords Decision making, Psychometric tests

Paper type Research paper

Introduction

Despite there having been much literature written about decision-making, only a small subset of it discusses the difficulty individuals have making important decisions, and of this research, only a very small number of studies look at indecision. The judgment and decision-making literature has yet to examine the role of indecisiveness as a unique construct that can have a significant impact on the decision-making process. The purpose of the current study is to add to our understanding of indecisiveness by defining the construct and developing a measurement instrument.

Though the research field has overlooked indecisiveness, companies are coming to realize the ubiquitous occurrence of indecisiveness among their top management. Indecision can give critical insight about CEO and boards of directors’ decision-making processes and perceptions. For example, The CEO of CompUSA, James Halpin, stated
that his organizational chart looks “very thin on top and very flat (decentralized) . . .
and that people should make their own decisions, and if it’s wrong, we’ll go back and fix it; but we say, don’t do an indecision. One of the things I tell the people in our company is, if you get fired, make sure its for something you did, not for something you didn’t do . . . Make a decision and move on. If it’s wrong, we’ll go back and fix it later” (Puffer, 1999, p. 29).

This work aims to develop the indecisiveness construct by reviewing the literature on the role of emotions in the decision-making process, the nonconsequentialist decision-making perspective, and the existing research on indecision. Building on the nonconsequentialist perspective, the indecisiveness construct is defined and a measurement instrument is introduced. Suggestions for future research and implications for the indecisiveness scale will be discussed.

**Literature review**

Traditionally, the judgment and decision-making literature has interpreted decision-making as a bounded rational process and has viewed emotions as an insignificant by-product. However, recent theorists (Blais, 2001; Loewenstein et al., 2001) have begun to ask the question, how do emotions such as fear, stress, and anxiety influence decisions? How should such feelings be incorporated in the decision-making process? Nonconsequentialist theories support the notion that emotions do influence choice, and research on this topic has grown rapidly in recent years. The current review will first present the traditional view of decision-making, the consequentialist perspective. Next, the Nonconsequentialist perspective will be reviewed as it serves as the basis of the indecisiveness construct.

**Consequentialist perspective on decision-making**

Loewenstein et al. (2001) notes that:

> Virtually all current theories of choice (in decision-making) under risk or uncertainty are cognitive and consequentialist (p. 267).

They use the word consequentialist in its general sense to describe how individuals make decisions based on the probability of the consequences of each choice. The consequentialist perspective is best represented by expected utility theory.

Expected utility theory sees decision-making as a computational process based on expected outcomes and subjective probabilities of choice. Before making a decision, the individual considers the severity and likelihood of expected outcomes, and through a subjective mental mathematical formula attempts to predict the probabilities of all the alternatives. Expected utility theory argues that individuals have a strong internal coherence and a logical consistency within a map of beliefs and preferences, which allows for a single and correct response. Further, emotions that occur during the decision-making process are seen as nonessential. This perspective suggests that cognitive evaluations of information form the totality of how a decision maker processes a risky choice. This perspective does not suggest that emotions do not exist, but rather suggests that they occur after the decision has been made, not during the decision-making process itself.
Nonconsequentialist perspective on decision-making

Recently researchers have looked at a nonconsequentialist model of decision-making that acknowledges the impact of emotions during the choice process (Baron, 1994; Frisch and Clemen, 1994; Loewenstein et al., 2001; March and Heath, 1994). Loewenstein et al. (2001) work examined how individuals make decisions at a “gut level” and view risk as a feeling that overwhelms them, as opposed to making decisions based on a subjective probability of an expected utility. The authors argue that the nonconsequentialist perspective (i.e. risk as emotions) should have large implications for research on risk and decision-making and our understanding of theories such as prospect theory and escalation of commitment. Much of the work developed to support the model was done in neuroscience, looking at judgment and decision-making from a neurophysiological perspective (see Bechara et al., 1997; Damasio, 1994; LeDoux, 1996).

There are three distinctive arguments to the nonconsequentialist model. First, the model suggests that the intensity and vividness of the potential consequences due to personal or vicarious exposure have a strong impact on how emotions are experienced during the decision-making process. Second, cognitive evaluations lead to affective responses, but more importantly, the reverse can affect judgment and choice preference. Lastly, the model strongly suggests that feelings may arise without cognitive mediation, and that affective responses can mediate cognitive evaluations and behavior (see Loewenstein et al., 2001). In other words, an individual’s emotions can take over before any cognitive processes. The individual can react to these emotions without cognition (e.g. jump out of the way of a car), or if the immediacy is not needed, he can cognitively process the situation. However, in the latter case, these emotions have already flooded one’s consciousness thus affecting judgment, perceptions of risk, vividness of consequences, and perceptions of probabilities[1]. The authors suggest that making a decision at a “gut level” is influenced by both anticipated and experienced emotions.

Concurrent emotions. Nonconsequentialist perspective defines concurrent emotions as those emotions that occur during the decision making process. Concurrent emotions are somatic reactions (i.e. visceral noncognitive reactions) that are quicker and simpler than cognitive reactions. Such somatic reactions are a crude but effective first assessment of threats and options, without the need to ignore one’s environment momentarily and think (Damasio, 1994). This is done when “the direct pathway is not subject to this type of filtering (cognitive processing of relevant and irrelevant information), and therefore will transmit the information about the threatening stimulus to the amygdala[2], regardless of whether or not the stimulus occurs in the focus of attention (Armony et al., 1997, quoted in Loewenstein et al., 2001, p. 268).” LeDoux (1996) states that the amygdala triggers the release of adrenaline and other hormones into the blood stream, which elevates an avoidance response and more importantly disrupts the control of rational thought. Further, this view argues that somatic reactions to threatening stimulus (such as risk) may not be seen or brought to one’s focus by the cortical systems, perhaps due to subtle environmental cues, but are still experienced viscerally (see Loewenstein et al., 2001, for a full review). Therefore, evidence supports the notion that risk can be assessed by non-cognitive, somatic processes and, at times, individuals assess choices and make decisions based on these emotions (Loewenstein et al., 2001). The current study will employ the term concurrent emotion to describe emotions that are experienced during the decision-making process.
Literature in clinical psychology suggests that emotions commonly are in conflict with cognitive evaluations, and may be the root of certain pathologies of decision-making and behavior (Loewenstein et al., 2001). Ness (1994) demonstrated that emotional reactions to risky situations often are not in line with the decision maker’s cognitive assessment of risk severity. When such a gap exists between emotional reaction and cognitive risk, assessment of the emotional reactions tends to steer and dictate behavior. However, this tendency may be a poor adaptation:

Fear may lead us to slam on the brakes instead of steering into the skid, immobilizes us when we have the greatest need for strength, causes sexual dysfunction, insomnia, ulcers, and gives us dry mouth and jitters at the very moment when there is the greatest premium on clarity and eloquence (Loewenstein et al., 2001).

Loewenstein et al. (2001) quotes Barlow (p. 18), an authority in anxiety, as stating that individuals “are well aware that there is little or nothing to fear in situations they find so difficult.” It seems maladaptive that one’s emotions can become cruelly intense at the same time one’s reasoning and rational capabilities are fully functional and aware, all the while leaving the individual unable to abate or overcome any of the emotions. Surely emotions can be just as debilitating and paralyzing when an individual is facing a difficult decision. In order to advance our knowledge of decision-making, we must be able to better understand and adequately measure the critical concept of indecisiveness.

**Indecisiveness**

When facing a difficult decision, negative concurrent emotions may be so overwhelming that the individual becomes emotionally paralyzed during the decision-making process. It is this emotional prison which best exemplifies indecisiveness. In an organizational context, indecisiveness seems to have gripped some of America’s top corporations. An ABI Inform search showed over 160 popular business press articles discussing indecision in organizations. For example, Charan (2001) suggests that many organizations cultivate a culture of indecision, in that members of an organization make decisions but do not commit to them, and such decisions tend to be reversed later. Further, when decisions are made, the people responsible for carrying out the decisions are not committed to the decisions they agreed on. Charan (2001) further argues that abdication is so rampant in some organizations the decision-making process becomes dysfunctional.

Indecisiveness is debilitating. Obsessional indecision (Dunne and Llamas, 1998) is argued to be a “pure” obsessional disorder. Obsessional indecision occurs due to one’s inability to overcome overvalued ideas, move past worry time, and solve problems within a sufficient time frame (Dunne and Llamas, 1998). Lamprell’s study of the paralysis of indecision in his clients suggests that indecisiveness is a “resistance to change … being apparently incapable of enthusiasm, commitment or excitement” (Lamprell, 1989). This state leads individuals to perpetually weigh pros and cons with the perception that movement in any direction is impossible (Lamprell, 1989).

Indecisiveness, which inflicts societies, organizations, and individuals, is a phenomenon that needs to be better understood. However, according to Psychinfo and ABIinform (both electronic databases of journals, dissertations and books), there are only a few empirical or theoretical publications on indecision or indecisiveness[3], with
a majority of these coming from counseling psychology. Therefore, the current study will further define indecisiveness in terms of what indecisiveness is, what it is not, and how the construct has been confounded with other constructs in the decision-making literature.

**Defining indecisiveness**

Work by Jones (1989) suggests that one can categorize a person’s decisional situation into four subtypes: decided-comfortable, decided-uncomfortable, undecided-comfortable, and undecided-uncomfortable. The undecided-uncomfortable state most resembles the negative concurrent emotions present when an individual is in a state of indecisiveness. If one defines indecisiveness as undecided-uncomfortable, the undecided component suggests being stuck in the decision-making process, and the uncomfortable component reflects the negative concurrent emotions that are experienced. All in all, indecisiveness is the equivalent to being stuck in a decisional prison.

Indecisiveness may occur when an individual is facing a difficult decision that has no clear, easy choice. However, there are no universally easy or difficult decisions. What makes a decision difficult is often influenced by one’s perceptions, values, personal preferences, and gut emotional reaction. The immediacy and vividness of the regret that might occur due to an unwanted outcome may trigger emotions during the decision-making process, such as anxiety, dread, fear, and confusion. The individual’s experience of these negative concurrent emotions may become so overwhelming that he or she is unable to make a decision and feels they are stuck in a decisional prison. This state of indecisiveness is dysfunctional, difficult to maintain, and a threat to the decision-making process.

**Existing research on indecisiveness**

A majority of the current research examines indecisiveness as a trait that impacts career choice decisions. Unfortunately, very little is known about the psychological reasons individuals are indecisive in an organizational setting. Therefore, it is necessary to draw from other fields’ work on indecisiveness to assist in the development of a measurement instrument and better understand how this construct may impact organizational decision-making.

In the counseling psychology literature, research suggests that the key constructs that may lead to indecisiveness are fear of commitment (a strong predictor of indecision), self-consciousness, and perfectionism (Leong and Chervinko, 1996). In fact, Leong and Chervinko (1996) found that 20 percent of the variance in career indecision is due to a combination of these constructs. In support of this research, others have purported that individuals who score high on a perfectionism scale tended to be indecisive (Leong and Chervinko, 1996; Orange, 1997). There is also evidence that suggests that distractibility, daydreaming, negative self-statements, and failure to use positive self-cognition are significantly related to indecision (Harriott et al., 1996). Callanan and Greenhaus (1990) argued that career indecision had seven major antecedents: lack of information about oneself, the organization, the work environment outside the current organization, lack of self-confidence, decision making fear and anxiety, non-work demands, and situational constraints.
Confounding indecisiveness

The indecisiveness construct has been overlooked in the judgment and decision-making literature. This omission is likely due to indecisiveness being confounded within other constructs, namely dysfunctional decisional coping behavior. A key seminal work in understanding decision-making is Janis and Mann’s (1977) conflict theory model. Although the authors highlight much of the essence of indecisiveness, Janis and Mann’s model neglects to label indecisiveness as a distinct phenomenon. The conflict theory model is a consequentialist model arguing that conflict in decision-making can lead to less than optimal decisions; however, the model does not address individual’s becoming stuck in the decision-making process while experiencing negative concurrent emotions – the definition of indecisiveness. However, the theory describes a comparable emotional state that serves as an antecedent to dysfunctional decisional coping behavior.

Janis and Mann’s (1977) conflict theory states that intense decisional conflicts are likely to arise when one gains information that is a threat to the individual’s current state of mind, which triggers feelings of apprehensiveness, hesitation, uncertainty, and signs of acute emotional stress. Janis and Mann argue that these “unpleasant feelings of distress” elicit a desire to avoid, abdicate, or make a dysfunctional choice (dysfunctional decisional coping behaviors). In sum, dysfunctional decisional coping behaviors are an outcome of the decision-making process, whereas indecisiveness occurs during the decision-making process when an individual is stuck in the process and overwhelmed by negative emotions the decision has created.

With regard to measurement instruments, it is common in the decision-making literature to have overarching constructs, such as coping and conflict, subsume critical variables that impact decision-makers differently (Anderson, 2003). Indecisiveness seems to have met a similar fate. Several instruments currently exist to measure the indecision trait and dysfunctional decisional coping behaviors. Unfortunately, these instruments have been unable to successfully yield high levels of construct validity. I believe that the limitations of these measurement instruments come from the confounding of indecisiveness.

One important example of the confounding of indecisiveness is Mann et al.’s (1997) decision-making questionnaire (Melbourne Decision-making Questionnaire or MDMQ). This questionnaire is based on Janis and Mann’s (1977) work on the conflict theory model of decision-making and is the current seminal work on operationalizing and measuring dysfunctional decisional coping behavior. However, the MDMQ seems to have several psychometric limitations, including the inability to differentiate variables adequately. In fact, several items on the MDMQ look very similar to questions on existing indecisiveness scales (Brisbin, 1992; Brisbin and Savickas, 1994; Gati et al., 1996; Haraburda, 1999; Lancaster et al., 1999; Leong and Chervinko, 1996). A sample item from the MDMQ is, “After a decision is made I spend a lot of time convincing myself it was correct.”, and a parallel item from an indecision questionnaire is, “After I have decided that I want to be friends with someone, I think I have made a mistake” (multi-domain decisiveness scale, Haraburda, 1999). Other MDMQ items that seem to measure the indecisiveness construct include, “I avoid making decisions” and “I cannot think straight if I have to make a decision in a hurry”.

Clearly, it is difficult to differentiate between constructs that are conceptually quite different when the measurement instrument treats them as the same. I suggest that
indecisiveness be separated from dysfunctional decisional coping behavior, allowing higher levels of discriminant validity between different coping behaviors. This will allow for a more precise and complete understanding of the effects of difficult decisions, indecisiveness, and dysfunctional coping behavior in the decision-making process. Developing indecisiveness into separate construct with its own measurement instrument is a vital first step in furthering our understanding of the decision-making process.

Methodology and design
Sample and procedure
Exactly 578 undergraduate students at Texas A&M University participated in this study. Those students who participated were compensated through extra credit for the course they were taking and had a chance to win one of four $50 prizes. The sample consisted of 51 percent female and 49 percent male participants. The participants’ age ranged from 18-29 years (M = 21.46).

The sample was selected for various reasons. This study aims to understand human decision-making and indecisiveness and attempts to capture a wide range of critical decisions individuals must face. Advanced level college students approaching graduation are a suitable sample of individuals facing many changes and crucial decisions. With the aim of the study being to develop an indecisiveness measure, it is not necessary to focus on individual decision-making in a specific organization. However, future research may benefit from studying indecisiveness in an organizational context or using a specific sample group (e.g. business executives).

A natural decision-making methodology was utilized in the current study to test the indecisiveness scale. This study moves beyond the limitations of scenarios and controlled experiments normally used in the decision-making literature (which tend to have a lack of personal relevance to the participant), and attempts to understand real decisions that are relevant to participants’ own lives. Further, simulations and scenarios cannot effectively capture genuine indecisiveness that occurs during the decision-making process. Therefore, I examined indecisiveness in a naturalistic setting using the participants’ own decision. Subjects were asked to write in paragraph format the “biggest” decision they were currently facing in their life and to complete a battery of questionnaires with regard to their “big” decision. Due to participants’ strong emotional investment in the experiment, this natural decision-making methodological design allowed for a better assessment of indecisiveness experienced during the decision-making process.

Data analyzed in this study was collected at one time period and employed a software program that provided detailed instructions guiding the participants through the questionnaires. The lead investigator was also present at all times to help participants with any problems. Participants first filled out demographic data, then immediately were asked to write approximately two paragraphs about the biggest decision they are currently facing in their life and to complete a battery of questionnaires with regard to their “big” decision. Due to participants’ strong emotional investment in the experiment, this natural decision-making methodological design allowed for a better assessment of indecisiveness experienced during the decision-making process.

Data analyzed in this study was collected at one time period and employed a software program that provided detailed instructions guiding the participants through the questionnaires. The lead investigator was also present at all times to help participants with any problems. Participants first filled out demographic data, then immediately were asked to write approximately two paragraphs about the biggest decision they are currently facing in their life. Excitingly, students appeared eager to write about their decision and on average wrote approximately 630 words, taking 30-60 minutes. The students seemed intrinsically motivated to talk about their decision and appeared to take a great deal of care writing and answering the questions. Many of the decisions centered on future career and relationship topics, such as career options, graduate school issues, and post-graduation relationship issues.
Next, participants were asked in a simple agree/disagree format whether they felt indecisive about their big decision. The software program guided participants through the survey, and only individuals who agreed that they felt indecisive about their decision completed the Indecisiveness Scale. Of the 578 who participated, 465 agreed that they felt indecisive about their “big” decision. These 465 participants comprised the final data set of the current study. With regard to their “big” decision, participants completed several questionnaires; two which are relevant to the current study – the indecisiveness scale and the decision-making strategy scale.

Scale development and results

*Indecisiveness scale*

The indecisiveness scale is a 13-item measure assessing one's indecisiveness towards a particular decision (see Appendix, Table AI). Participants give their ratings on a six-point Likert scale ranging from “strongly disagree” to “strongly agree.” The questionnaire’s instructions are: “Please answer the following questions based on the biggest decision you are currently facing in your life.” The item scores are summed to produce an overall Indecisiveness Scale score with a maximum score of 78. High scores indicate that the participant is highly indecisive about their big decision, and low scores suggest little to no indecisiveness.

Development of the indecisiveness scale went through three iterations. Items for the scale were based on theory development from the current paper and work on concurrent emotions in the decision-making process (Loewenstein *et al.*, 2001; Jones, 1989; Lamprell, 1989; Zeelenberg *et al.*, 1996; Zeelenberg and Beattie, 1997; Zeelenberg *et al.*, 1996). A total of 35 items were initially constructed and then given to 51 volunteers from the academic community who are familiar with scale development. Volunteers provided qualitative and quantitative feedback, such as appropriateness of items, face validity, and wording accuracy and suggestions. From the feedback, 19 items were kept and further developed through rephrasing and rewriting. An initial Indecisiveness Scale of 19 items was developed, which was given to 128 students. Six items were then dropped due to inappropriateness and low loading on a factor analysis.

Using the indecisiveness scale with the final sample of 465 participants resulted in a Cronbach’s Alpha of 0.92. An exploratory factor analysis of the indecisiveness scale was conducted in which factors were extracted using iterated principle factors and were rotated obliquely. Several traditional criteria for determining the number of factors supported a one-factor solution. Inspection of the eigenvalues of the correlation matrix of the 13 variables revealed only one eigenvalue greater than 1.00. This one-factor had an eigenvalue of 6.7, and explains more than 51 percent of the variance (see Table I). Inspection of the loading matrix associated with the one-factor solution indicated an approximation of a simple structure (each item loaded highly on only one factor with no evidence of substantial cross loading). Eigenvalues for factors 2-13 were all below 1.00. Examination of a scree plot (see Figure 1) of the data indicated a sharp break after the first factor, visually similar to an “elbow,” suggesting the presence of one underlying factor. Eigenvalue results in conjunction with the scree plot suggest that the indecisiveness scale is measuring one construct.
Decision-making strategy scale
To assess convergent and divergent validity of the indecisiveness construct, an adapted version of the decision-making style inventory (DMSI) (Nygren, 2000) was used (Appendix, Table AII). The DMSI attempts to categorize multiple normative and descriptive decision-making strategies. Though the scale in its original form speaks to how an individual makes decisions in general, it was adapted for the current study to reflect the strategy the decision maker used on their “big” decision. The decision-making strategy scale (see appendix) contains two subscales, one reflecting logical strategies (e.g. I have defined what I want and will make a decision that will maximize what I want), and one reflecting emotional strategies (e.g. in the end I will rely on my gut feeling to make my final decision).

The logical strategies portion of the decision-making strategy scale is a seven-item questionnaire using a six-point Likert scale. The questionnaire measures whether the decision maker is using a logical strategy to make a decision. The questionnaire’s instructions and ratings mirror that of the indecisiveness scale. The item scores are summed to produce an overall score with a maximum score of 42. High scores indicate that the participant is making their big decision based on logic, and low scores suggest

<table>
<thead>
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<th>Factor</th>
<th>Eigenvalue</th>
<th>% of variance accounted for by the factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>6.67</td>
<td>51.31</td>
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<tr>
<td>2</td>
<td>0.99</td>
<td>7.65</td>
</tr>
<tr>
<td>3</td>
<td>0.87</td>
<td>6.72</td>
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<tr>
<td>4</td>
<td>0.78</td>
<td>5.97</td>
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<tr>
<td>etc.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Notes: $n = 465; * p < 0.05; ** p < 0.01$

Table I. Exploratory factor analysis results for the indecisiveness scale

Figure 1. Scree plot results for the indecisiveness scale
less use of logic in their decision-making strategy. For the sample of 578 participants, the logical strategy subscale has a Cronbach’s Alpha of 0.75.

The emotional strategies portion of the decision-making strategy scale is an 11-item questionnaire using a six-point Likert scale. Similar to the logical subscale of this questionnaire, the items assess whether the decision maker is using an emotional strategy to make a decision. Item scores are summed, which results in an overall score of 66. High scores indicate that the participant is making their big decision based on emotion, and low scores suggest little use of emotion in their decision-making strategy. For the sample of 578 participants, the emotional strategy subscale has a Cronbach’s alpha of 0.79.

The logical and emotional strategy subscales showed a negative correlation with each other ($r = -0.133, p < 0.002$) using a two-tailed Pearson correlation (see Table II). For convergent validity, indecisiveness would be correlated positively with a decision strategy based on emotions. Accordingly, the correlation between indecisiveness and an emotional decision strategy is positive, ($r = 0.085, p < 0.042$) using a two-tailed Pearson correlation, suggesting that there is some convergent validity between the constructs. For divergent validity to occur, the decision maker who is indecisive would most likely not take on a logical decisional strategy. The correlation between indecisiveness and having a logical decisional strategy is nonsignificant ($r = 0.044, p < 0.297$) using a two-tailed Pearson correlation, indicating that there is some divergent validity between the constructs.

**Conclusion**

The judgment and decision-making field has yet to recognize what CEO’s, consultants, and managers have always known – indecisiveness is toxic to a leader’s ability to perform. To date, only a small subset of research has examined the difficulty individuals have making important decisions, and of this research, only a very small number of studies look at indecision. The current study aided in the theoretical development of the indecisiveness construct, created a definition of indecisiveness that reflects current research, and differentiated indecisiveness from other constructs in the field. Results suggest positive psychometric properties of the indecisiveness scale, and the display of convergent and divergent validity bodes well for the measurement instrument. Yet, the most meaningful result from the current study is the development of a definition of indecisiveness from a nonconsequentialist perspective. Indecisiveness is defined as the state of experiencing negative concurrent emotions while being stuck in the decision-making process, and this definition differentiates indecisiveness from existing constructs in decision-making.

<table>
<thead>
<tr>
<th>Variables</th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Indecisiveness</td>
<td>38.07</td>
<td>13.23</td>
<td>0.92***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Logic subscale</td>
<td>30.59</td>
<td>5.73</td>
<td>0.044</td>
<td>0.75***</td>
<td></td>
</tr>
<tr>
<td>3. Emotions subscale</td>
<td>34.40</td>
<td>8.07</td>
<td>0.085*</td>
<td>-0.133**</td>
<td>0.79***</td>
</tr>
</tbody>
</table>

Table II.

Means, standard deviations, reliabilities, and correlations

**Notes:** $n = 465$; *$p < 0.05$; **$p < 0.01$; ***Alpha reliability coefficients are in italics along the diagonal
As noted earlier, research studying indecisiveness is sparse at best, as the construct has been consistently overlooked in the literature. Researchers may be hesitant to study indecisiveness because the phenomenon is thought to be rare, and does not speak to the general reality of the decision-making process. However, this study indicates that the presumed anomaly may exist more often than the literature reflects, with only one caveat – the decision must be important to the decision maker for indecisiveness to occur. Perhaps the most interesting outcome of this methodology is that of the 578 total participants who completed the study, 465 stated that they felt indecisive! In other words, approximately 81 percent of the participants felt indecisive about their “big” decision. This speaks to the frequency of individuals experiencing negative concurrent emotions during the decision-making process.

One limitation of the current study is that the sample used is not easily generalizable to a management context. To understand managerial decision-making, subsequent work should use a sample of executives and policy makers in multiple industries and levels of management. Another possible limitation is that participants self-selected themselves as indecisive. The participants’ responses to this agree/disagree statement is the sole selection criteria, and thus individuals who are not truly indecisive may have answered the indecisiveness questionnaire. Positively, this limitation suggests that the results of this study may have been diluted, and a more accurate criterion to select indecisive individuals may have resulted in more robust relationships. Future research may use alternative methodology, for example a Likert scale to measure one’s degree of indecisiveness.

Understanding the role of emotions during the decision-making process is complex, and many individual and environmental variables can make an individual vulnerable to indecisiveness. This work is especially critical in the upper echelons of organizations, where indecisiveness can affect millions of lives and cost billions of dollars. With a solid construct definition and psychometrically sound measurement instrument, this paper hopes to encourage future research on indecisiveness and its role in the decision-making process.

Notes
1. LeDoux (1996) states “emotions can flood consciousness … because the wiring of the brain at this point in our evolutionary history is such that connections from the emotional systems to the cognitive systems are stronger than connections from the cognitive systems to the emotional systems.”

2. Amygdala is a primeval arousal center, in the human neuro structure, which is central to the expression of negative emotions, and is central to producing and responding to nonverbal signs of anger, avoidance, defensiveness, and fear. Behavioral examples that the amygdala produces are the freeze reaction, sweaty palms, and the tense-mouth. Givens (2001) notes that “working through the hypothalamus, the amygdala releases excitatory hormones into circulating blood … After surgical removal of the amygdala, growls, screams, angry voices, and other negative signs may lose their meaning and become incomprehensible as afferent cues.”

3. I noted earlier that an ABI Inform search resulted in over 160 popular business press articles (e.g. Forbes, Business Week, and Wall Street Journal to name a few). However, when the search was limited to peer reviewed journals only a few articles directly or indirectly discussed indecision.
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**Appendix. Measures**

<table>
<thead>
<tr>
<th>Item</th>
<th>Scale 1: indecisiveness scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Because of this decision, I feel incapable of enthusiasm, commitment, or excitement</td>
</tr>
<tr>
<td>2</td>
<td>I get a lot of negative feelings when I try to commit to one of my choices</td>
</tr>
<tr>
<td>3</td>
<td>Though this is a big decision, I feel in control mentally and emotionally (reverse scored)</td>
</tr>
<tr>
<td>4</td>
<td>I am feeling frustrated, numb, and confused because of this decision</td>
</tr>
<tr>
<td>5</td>
<td>Thinking about committing to a choice is one of the most stressful parts of my day</td>
</tr>
<tr>
<td>6</td>
<td>At this point, I am undecided but do NOT feel uncomfortable or stressed out (reverse scored)</td>
</tr>
<tr>
<td>7</td>
<td>I feel paralyzed or stuck and cannot move or act</td>
</tr>
<tr>
<td>8</td>
<td>I cannot think straight in trying to make this decision</td>
</tr>
<tr>
<td>9</td>
<td>I am having an emotionally difficult time with making a decision and feel trapped in the decision-making process</td>
</tr>
<tr>
<td>10</td>
<td>I feel sick when I think about making a decision</td>
</tr>
<tr>
<td>11</td>
<td>I feel emotionally frustrated and overwhelmed when attempting to make a final decision</td>
</tr>
<tr>
<td>12</td>
<td>I feel comfortable with the choices and decisions I will have to make (reverse scored)</td>
</tr>
<tr>
<td>13</td>
<td>I feel I cannot decide, and this is causing me so much stress and frustration</td>
</tr>
</tbody>
</table>
Please answer the following questions based on the biggest decision you are currently facing in your life. Indicate how much you agree or disagree using the following six-point scale.

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Logic</strong></td>
<td>I have made a careful initial estimate of each option</td>
</tr>
<tr>
<td>1</td>
<td>I have made a careful initial estimate of each option</td>
</tr>
<tr>
<td>2</td>
<td>I have defined what I want and will make a decision that will maximize what I want</td>
</tr>
<tr>
<td>3</td>
<td>I have a strong preference based on rational logic</td>
</tr>
<tr>
<td>4</td>
<td>I have made a mental written list of all of the factors or attributes that will be important to my decision</td>
</tr>
<tr>
<td>5</td>
<td>In an unbiased manner, I will evaluate the importance of each piece of information in the decision process before making a decision</td>
</tr>
<tr>
<td>6</td>
<td>I clearly know the direction I want to go and will make a decision that will take me there</td>
</tr>
<tr>
<td>7</td>
<td>I will choose my decision based on a careful weighing of all of the relevant information</td>
</tr>
<tr>
<td><strong>Emotion</strong></td>
<td>One or more of my choices just feels wrong</td>
</tr>
<tr>
<td>1</td>
<td>One or more of my choices just feels wrong</td>
</tr>
<tr>
<td>2</td>
<td>No option “feels” right, and that is why I have not decided</td>
</tr>
<tr>
<td>3</td>
<td>I have been frantically looking for a solution</td>
</tr>
<tr>
<td>4</td>
<td>I will make a decision when I feel less anxiety about the situation</td>
</tr>
<tr>
<td>5</td>
<td>My fear and worry about my options will play a big part of this decision</td>
</tr>
<tr>
<td>6</td>
<td>The logical or rational choice (the decision I should logically choose) does not feel right</td>
</tr>
<tr>
<td>7</td>
<td>When trying to make a decision, certain options scare me and make me want to avoid them</td>
</tr>
<tr>
<td>8</td>
<td>If I find this decision taxing or difficult, I may make a hasty decision</td>
</tr>
<tr>
<td>9</td>
<td>I am no longer considering one of my choices because I do not feel good about it</td>
</tr>
<tr>
<td>10</td>
<td>In the end I will rely on my “gut feeling” to make my final decision</td>
</tr>
<tr>
<td>11</td>
<td>I will make a decision even if I am not sure what all of my alternatives are</td>
</tr>
</tbody>
</table>

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