M.Sc. in Economics and Business Administration Customer and Commercial Development

Master’s Thesis

Mindfulness as a Service -
A Quantitative Analysis of the Relationship Between a Mindfulness Service and Airline Passenger Satisfaction

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Abstract

The concept of mindfulness has gained more attention than ever in the westernized world. Its significant positive influence on individual’s health makes mindfulness practice not only a valuable tool for people facing problems, such as depression or anxieties, but also makes it a desirable practice for society in order to enhance one’s quality in various aspects of life. Out of a business perspective, mindfulness has only received limited attention. The current study investigates whether mindfulness as a business model, in particular, mindfulness as a service (MaS) has a positive influence on airline passengers’ in-flight satisfaction, airline purchase intention and willingness to pay for the service. Thereby, the potential impact of flight anxiety is investigated, as well as whether differences occur according to the flight duration (short-haul vs. long-haul). The study employs a quantitative research method and hypotheses are tested by applying t-test and linear regression analyses. The results indicate a positive impact of a Mindfulness Service on passengers’ satisfaction levels for both short- and long-haul flights. Further, an enhanced satisfaction level is found to lead towards greater airline purchase intention and willingness to pay for the service, especially during long-haul flights. Moreover, the level of flight anxiety seems to exert a significant influence by indicating that a higher level of anxiety leads to higher satisfaction with the service, purchase intention and willingness to pay. With proving such beneficial effects, airline management should consider measures to optimally leverage the concept of an in-flight Mindfulness Service.

Keywords: Mindfulness, service, airline industry, flight anxiety, consumer behavior
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Introduction

Delivering superior customer value and satisfaction are crucial to the competitive edge of every business (Weitz & Jap, 1995). Customer satisfaction is perceived as a key influence in maintaining relationship quality between a firm and its customers, and hence, in terms of purchase intention and loyalty (Hansemak & Albinsson, 2004). With the liberalization of the aviation market and the increasing competition, maintaining passengers’ satisfaction and loyalty is critical for the survival of airlines (Dennett, Ineson, Stone & Colgate, 2000). With passengers facing some kind of stress or anxiety, ranging from slight nervousness or discomfort to actual flight phobia when traveling by airplane (Van Gerwen & Diekstra, 2000), however, care way more about their well-being and comfort nowadays (Vink & Hallbeck, 2012; New York Times, 2018), airlines aim for new strategies to minimize any inconvenience for passengers by making use of new technology and services that enable the offering of a better flight experience (Liu, Hu & Rauterberg, 2015).

While many airlines have realized the potential of in-flight entertainment (IFE) system for improving customers’ comfort level, new concepts, including healthier eating, better sleeping and mental well-being have been stressed by airline companies all over the world. For instance, while American Airlines partnered up with the mattress and bedding brand Casper to design pillows, blankets and other products to help with a more comfortable sleep, Turkish Airlines, is offering a menu of qualitative herbal teas to help relieve stress and promote sleep within their ‘Fly Good Feel Good’ campaign. A step further goes TAP Air Portugal by tapping five Michelin-starred Portuguese chefs to create low-calorie Portuguese-influenced entrees for its passengers. (New York Times, 2018)

Besides, research has increasingly been focusing on airline services that enhance passenger comfort level and in-flight experience while reducing stress. Liu et al. (2015) for instance, explore how music can be utilized to reduce stress during a flight, using passengers’ heart rate as in indicator of the stress. Specifically, they investigate whether recommending personalized music in either increasing, the same or decreasing level of speed, decreases passengers stress level.
While the concept of mindfulness has received considerable attention within literature for a while now, mindfulness in the western world only has gained popularity within the last years and is now increasing in focus in many people's everyday life (Hafenbrack, 2017). While large amount of academic literature deals with the positive effect of mindfulness on health and psychological well-being, including reduction of depression, burn-out or phobias (e.g. Kabat-Zinn, 1990; Brown & Ryan, 2003), little research exists on the potential influence of mindfulness in a consumer behavior context and its influence as a service offer towards customer satisfaction.

Therefore, the purpose of this study is to investigate the relationship between mindfulness as a service (MaS), in particular, a mindfulness meditation service (further referred to as Mindfulness Service) and airline passengers’ satisfaction. Further, variables acting as moderators or outcomes of this relationship will be tested, as these might provide interesting implications for theory and practice. Therefore, a quantitative research method is chosen, focusing on passenger’s perceived satisfaction with the Mindfulness Service and how it influences their intentional behavior regarding willingness to pay for the service and future airline choice. With customers' well-being depending on the airline, airline tickets are usually being regarded as high involvement products due to the relatively a higher risk the contain (Patterson, 1993). Hence, the choice of airline is of great personal importance to people and depends on the level of overall satisfaction. Especially, for passengers with a higher level of flight anxiety, certain attributes might be especially important when considering airline choices (Molin, Blangé, Cats & Chorus, 2017).

Therefore, investigating the potential influence of mindfulness meditation within the context of the airline industry seems to be especially interesting and most promising in terms of value generation for customers in a service context. Furthermore, focusing on specifically mindfulness meditation as a service provides an even more impactful contribution to existing literature within this field, since most research in the field of mindfulness in the service sector is directed towards the effect of trait mindfulness or mindfulness services that do not include the meditational aspect. Besides, this study contributes to the tourism and airline service literature, as well as consumer behaviour literature in a service context, thereby taking into account the concept of anxiety and (flight) service duration. Moreover, this study offers important theoretical and practical implications, by conceptualizing mindfulness as a service
offering and introducing another driver for in-flight passenger satisfaction and revenue generation.

1.1. Motivation & Research Gap

The motivation for this research stems from three critical aspects in both the mindfulness domain, as well as the airline industry. To provide greater reasoning for this research’s purpose, as well as for the researcher’s motivation, the single aspects will be described respectively.

Mindfulness Meditation

First, mindfulness in terms of mindfulness meditation has recently gained more attention than ever and has become an important asset for individuals to cope with the problems of any kind (Stankov, Filiponau & Vujičić, 2020). Although the concept of mindfulness has been researched over the last decades, particularly in the health and psychology domain, mindfulness research in a consumer behavior context in general has lacked focus. Due to its promising potentials for health and performance, such as negative emotion (e.g. stress and anxiety) regulation (Baer, Smith, Hopkins, Krietemeyer & Toney, 2006; Hafenbrack, 2017), decrease in burn-out, or better job performance (Kersemaekers et al., 2018), an individual’s quality of life can significantly improve. Therefore, more businesses, for instance, incorporate meditation and mindfulness sessions during the workday for its employees (Hülsheger, Alberts, Feinholdt & Lang, 2013). However, with meditation-based mindfulness’s rise in popularity, to the authors’ knowledge, no research to date has been investigated the concept of mindfulness as a business model and service offering, as well as its effect on customer satisfaction. Therefore, this study is the first to provide a potential concept of mindfulness as a service (MaS) aiming to increase customer satisfaction.

The Airline Industry

The increasing competition in the airline market resulted in lower fare tickets which constitutes another risk of airlines not being able to maximize revenue (Warnock-Smith, O’Connell & Maleki, 2017). Therefore, in order to improve their financial performance and ensure survival in the market, the concept of airlines generating additional revenues from secondary sources,
such as fee-based ancillary products and services has become a major new concept in relation to differentiating purposes, offering value to passengers and thus, increasing passenger satisfaction levels (O’Connell, 2011; Warnock-Smith et al., 2017). Especially since maintaining customer satisfaction is essential to keeping passengers’ volumes up, airlines constantly need to create new ideas regarding value adding services, which fit customer needs, but do not come across as another way of charging for something (O’Connell and Warnock-Smith, 2013).

Moreover, in addition to lower fares, demand fluctuations evoked by anxiety constitute another critical challenge for airlines (Ito and Lee, 2005). Although, with increasing safety over the years, an accident rate amounting to only 0.15 per one million flights (IATA, 2019), as well as a likelihood of a 22 times more safe travel experience compared to cars on a per-mile basis (Ackman, 2001) making air travel the safest transportation method available (IATA, 2019), a considerable amount of people experience feelings of discomfort and anxiety when traveling by airplane (Van Gerwen and Diekstra, 2000). A study among german citizen shows, that approximately 40% of the participants experience some extent of anxiety while flying (Statista, 2020a) (Appendix A). The consequences of anxiety can be seen in the extreme demand fluctuations and a decline in airline revenues (Ito and Lee, 2005; Wang, Wei, Cole, Shu & Chancellor, 2016). Flight anxiety occurs due to various reasons and backgrounds, including perceived loss of control, accidents or terrorist attacks (Bor & Van Gerwen, 2003) or negative media (Wang, Wei, Cole, Shu & Chancellor, 2016).

Therefore, with flight-related fears remaining one of the most common anxiety states and phobias for which patients seek psychological intervention, a range of psychological treatment approaches have been established.

In early years, the treatment consisted predominantly of traditional, long-term explorative psychodynamic therapy, which focused on unconscious causes or ‘deeper’ problems. However, only low success rates could be generated, leading to the adoption of different approaches, such as Cognitive Behavioral Therapy (CBT), which has proved to be highly effective. Hence nowadays, CBT is a critical approach for treating fear of flying (FOF) and is used in traditional fight phobia seminars offered by the airline. (Bor, 2007)

However, since intensive treatments require time and large monetary expenses, treatment seeking depends to great extent on the willingness to pay, but also on the severity of the anxiety, leaving a big portion of (especially relatively low anxiety level) passengers to themselves to
find a solution. Whereas for some, any form of distraction might help dealing with feelings of anxiety, others tend to turn to alcohol or medication prior or during the flight (Howard, Murphy & Clarke, 1983).

On the basis of both challenging circumstances (anxiety and need for differentiation, value and satisfaction creation), many US Airlines have adopted a Mindfulness Service Program which is offered as part of the in-flight entertainment (IFE). For instance, all United Airlines and JetBlue customers have access to the popular digital meditation service Headspace, which content includes among others, videos addressing fear of flying and difficulty sleeping upright. Congruently, American Airlines offers mindfulness meditation exercises to its customers via the meditation app Calm. Similarly, among international carriers, Swiss Air started offering Headspace on long-haul flights, whereas British Airways created a well-being channel on its in-flight entertainment systems, including meditation and stretching exercises. Furthermore, the Hong Kong-based carrier Cathay Pacific recently launched in-flight videos, called “Travel Well With Yoga,” in a partnership with a popular yoga studio chain, including several 20 minutes videos of yoga and meditation exercises for passengers. These exercises aim to keep passengers relaxed and free of bodily sensations due to anxieties. (New York Times, 2018)

This offering seems to constitute a suitable solution for both passenger and airline, as from a consumer perspective, anxiety is likely to be reduced while well-being and satisfaction is increased. Besides, from a business perspective, the airline profits from additional income through a secondary fee-based service, as well as a differentiation benefit which potentially leads to an increased number of passengers and loyalty.

1.2. Research Question Formulation

Inspired by the findings outlined in the previous sub-chapter, this study functions as an assessment of whether a Mindfulness Service as part of the in-flight entertainment program constitutes an opportunity to increase passenger’s satisfaction. Besides, the study aims to fill the above outlined research gap and provide practical insights for airline firms and potential
other service providers. In particular, the relationship between Mindfulness as a Service (MaS) and customer satisfaction regarding its perceived flight experience will be investigated.

Consequently, the research question of this study is formulated as follows:

\textit{Does a Mindfulness Service increase passenger satisfaction?}

Besides, the following sub-questions are explored:

1. \textit{Is the relationship between a Mindfulness Service and passenger satisfaction influenced by the level of anxiety a passenger faces during a flight?}

2. \textit{If satisfied, do passengers intent to choose an airline that offers a Mindfulness Service over an airline that does not offer such a service?}

3. \textit{Are passengers willing to pay for the Mindfulness Service?}

The research adopts the perspective of an end consumer, as the focus lies on the consumer’s perceptions of a Mindfulness Service regarding their level of satisfaction, which constitutes the basis of their behavioral attitudes and intentions regarding fee acceptance and future airline choice.

\subsection*{1.3. Delimitations}

This research is subject to two delimitations, namely the geographical scope, as well as the industry. First, the geographical scope is limited to German citizens only due to the fact that different nationalities might hold different preconceptions towards the concept of mindfulness and evaluate the service differently due to different cultural standards and hence, attitudes (Durvasula, Andrews, & Netemeyer, 1997). Therefore, inconsistency in answers could have led to distorted results. Besides, in order to have a representative sample according to the target population, the cope of this study was narrowed to the researcher’s home country Germany.
Furthermore, the scope of this study is limited to the airline industry, hence, implications can be majorly derived for this particular industry.

1.4. Structure

Following this introduction, the structure of this work comprises five following chapters. First, a comprehensive literature review is presented to provide a theoretical foundation of the concept of mindfulness and its fit into the airline industry. Afterwards, in the third chapter, this work’s research frameworks are presented and developed hypotheses, which are majorly based on previous works in the field of interest, are introduced. The next chapter presents the methodological procedures applied, followed by the data analysis and its results. Besides, in the subsequent chapter, theoretical and practical implications of the findings are discussed, limitations of this study are outlined and recommendations for future research are derived. Lastly, the work closes with a short conclusion.

Literature Review

In the following sections the general theoretical background is presented, on which the hypotheses for his research are based on.

2.1. The concept of Mindfulness

Having its roots in Buddhism, mindfulness is most often associated with the practice of meditation (Shapiro, Carlson, Astin, & Freedman, 2006). However, mindfulness can be viewed within two contemporary approaches. First, derived from the Buddhism tradition, meditation-based mindfulness, westernized by Kabat-Zinn (1982), can be defined as the nonjudgmental awareness that emerges with the attention on the present moment. Congruently, Bishop et al. (2004) define it as a state of nonjudgmental attentiveness to and awareness of moment-to-moment experiences, making awareness a crucial attentional component of the construct. In other words, it is “a state of being attentive to and aware of what is taking place in the present” (Brown and Ryan, 2003, p. 822). Thereby, the attention is characterized as open and receptive towards whatever is occurring in the present moment making an attitude of open-minded curiosity a further essential component of meditation-based mindfulness Kabat-Zinn, 1990).
Besides, it involves the ability to notice and observe one’s own thoughts but maintain distance from them in order to view them impartially. According to Kabat-Zinn (1990), this aspect of mindfulness makes it a metacognitive skill as it involves cognition to become aware of one’s cognition.

While it is in harmony with the principals of meditation-based mindfulness, the second approach refers to mindfulness as a trait, rather than an achievement through the practice of meditation and therefore, exclude the practice of meditation. Moreover, it is aligned with cognitive abilities, personality, and cognitive styles (Sternberg, 2000).

Being mindful means actively noticing changes happening constantly in the world (Langer, 1992) indicating that sensitivity to what is occurring in a current situation is a core characteristic of mindfulness. Mindful people welcome to new situations and are open to new perspectives, in fact they seek new things, create novel ways of thinking, and are more likely to be able to formulate multiple solutions by having broader perspective-taking in problem situations. Possessing those multiple perspectives makes them more open and less relying on previously established categories, which likely results in less judgment in the sense that an event or situation is not categorized as good or bad. (Langer, 1992)

Langer (1992) further suggests, that mindfulness can as well be understood as the reverse of mindlessness, which he defines “(...) as an inactive state of mind characterized by an over-reliance on distinctions drawn and categories created in the past, i.e., in which the past “over-determines” the present. One is trapped in a single perspective, insensitive to current context, and governed rather than guided by rules and routines” (p. 290). Pagnini (2019) further states, that mindlessness treats new information or situations as if it/they were context-free, meaning mindless people pay little or no attention to the novelty in a present situation.

Even though it has been argued that mindfulness is a natural human capacity that can be experienced by everyone (Brown & Ryan, 2003; Glomb, Duffy, Bono & Yang, 2011) being mindful is often forgotten as habitual thoughts or worries relating future or past events frequently draw the attention and awareness away from the present moment. By returning the focus to the present, however, one can facilitate a richer experience of the current event (Kabat-Zinn, 1990). Therefore, individuals need to re-gain the capability of fundamental mindfulness skills, such as concentrating/focusing, observing and acting with awareness, nonjudgmentally, and non-reactively (Rodrigues, Nardi, Levitan, 2017), which can be achieved through meditation
practice (Kabat-Zinn, 2011). Thus, meditation practice can be seen as a mean or scaffolding for developing and cultivating the skills of getting into the state of mindfulness (Kabat-Zinn, 1990), and hence, could be seen as an antecedent of trait mindfulness.

Although in the western world, mindfulness has long been believed to be an unscientific religious practice, research in psychology and neurosciences have meanwhile developed several therapeutic interventions (Baer, 2003), which have provided evidence regarding the effectiveness of mindfulness practice in reducing anxiety (Brown and Ryan, 2003) and symptoms of stress (Kabat-Zinn, 1990) as well as improving well-being (Keng, Smoski, & Robins, 2011) and cognitive ability (Chiesa, Calati, & Serretti, 2011). In fact, studies found that even one session of physical awareness- or focused-breathing meditation for instance can immediately change an individual’s emotional state and reactive response to negative stimuli or emotions (Hafenbrack, Kinias, & Barsade, 2014) by suppressing automatically emerging negative associations (Lucke & Gibson, 2015). The underlying explanation for that lies within the premise that even if people suffer from problems or illnesses, “as long as [they] are breathing, there is more right with [them] than wrong with [them]” (Kabat-Zinn, 1990, p. xxviii). Hence, by switching the focus from past or future situations or issues to their actual status quo, which is simply being (and breathing), negative affects are left out of the mind, which makes one automatically feel better (Hafenbrack, 2017).

Therefore, the western model of mindfulness can be integrated into various typical day-to-day activities, including sports, walking or eating (Baer 2003; Kabat-Zinn 1982). Terms, such as mindful eating for instance come across more often in recent years and refers to the process of eating a meal consciously by focusing on the taste of various foods, leading to more emotional sensations and a higher level of satisfaction while eating and potentially, a longer feeling of fullness (Dalen et al., 2010). Therefore, as well as due to the fact that mindfulness can affect one’s eating behavior in the sense of encouraging preferences for healthier foods (Jordan, Wang, Donatoni & Meier, 2014), mindfulness is proven to have an influence on weight loss/management (Dalen et al., 2010). Furthermore, despite the influence of mindfulness on various aspects of life, mindfulness can also be encouraged though many ways. For instance, the former head coach of NBA teams, used insights from meditation to design practice exercises that
include no speaking or a setting with lights off in order to encourage more mental presence of the players (Gelles, 2015).

Although, mindfulness in western psychology is intended to enhance general well-being, as well as an improved capability to function effectively in the world around us, while reducing suffering and ‘defilement, the primary purpose/benefit within the traditional understanding is awakening/ enlightenment to enhance one’s general quality of life (Gardner, Moore & Marks, 2014). Therefore, one must understand the components that constitute the basic construct of meditation-based mindfulness interventions. This study further refers to mindfulness as the meditation-based construct.

2.1.1. Mindfulness-Based Interventions

In order to understand mindfulness as an intervention model to induce enlightenment and increase one’s quality of life, a fundamental understanding of the differentiation of the contents and the operations of the mind is required. Whereas, content of the mind refers to the reality of an individual’s current internal experiences, including moment-to-moment perceptions, memories, emotions and cognitions, operations of the mind refer to (metacognitive) processes in the mind, which lead to awareness of the particular contents and provide responses to the mind. (Gardner et al., 2014) Theses processes require the ability to perform the three fundamental operations of the mind, which have been described as concentration, attachment, and awareness (Mikulas, 2011). These operations also form the essential practice of MBIs.

Human beings often tend to become overly attached to its contents of the mind, leading it to adopt certain perceptions, beliefs, sensations, or self-images as reality and individuals getting lost in habitual ways of thinking, which in turn can cause stress, anxieties, depression and other issues (Gardner et al., 2014). Mindfulness-based interventions (MBI) aim to detach or decenter an individual in its being from its beliefs or ways of thinking (Sauer and Baer, 2010) by the process of noticing whatever emerges in one’s mind or consciousness and minimizing the emergence of automatic mind drifting towards habitual thoughts or reactions.

Generally, focusing on the future and/or past has been empirically associated with less-pleasant or negative affective states (Shipp, Edwards, & Lambert, 2009). An experience sampling study by Killingsworth and Gilbert (2010) finds that individuals who were thinking about their
present moment experienced more happiness at that time than those who were thinking about the past or future. Therefore, similar to the increase of pleasant feelings that occur while being immersed in a particular task or contemplating something much bigger than oneself (Rudd, Vohs, & Aaker, 2012), present awareness and reduced focus on the past and/or future likely leads to increased positive affect/reduced feelings of negative affect (Brown & Ryan, 2003; Hafenbrack, 2017).

Therefore, concentration in terms of self-control of attentional focus, is a required skill and prerequisite of narrowed or focused awareness on immediate internal experiences. Awareness, in turn, can be described as the process of developing a greater connection with moment-to-moment experiences and involves the simple objective observation of these internal experiences or contents of the mind in a non-judging or categorizing way. This way, one can more easily detach or decenter oneself from those contents, which in turn helps de-automating habitual action tendencies which are associated with particular thoughts and/or emotions, resulting in the contents of the mind having less power over one’s behavioral choices. (Gardner et al., 2014). Consequently, the goal of this awareness (i.e. insight) and hence, MBIs or training is that “(…) the contents of the mind can be seen for what they are, which is a part of the human experience that inevitably comes and goes, and thus does not always require a response (such as an automatic behavioral action tendency including avoidance/escape), and does not require repetitive and perseverative cognitive processes (i.e., rumination).” (Gardner et al., 2014, p. 328). In other words, it provides a perspective that experienced internal thoughts are both transient and subjective (Shapiro et al., 2006), leading to non-attachment and thus, improvements in one’s overall life satisfaction and personal well-being (Sahdra, Ciarrochi & Parker, 2016).

**Mindfulness- and Relaxation Techniques**

Generally, relaxation can be seen as a release from tension, anxiety, and/or fear and thus, as feelings of peace well-being (Whittingham, 1996). Mindfulness practice includes specific mind and body relaxation techniques which target the induction of the body's natural relaxation response, which comes along with muscle distension, lower blood pressure and slower breathing, a feeling of increased well-being, as well as reduction of physiological arousals (Pagnini, 2019).
According to Whittingham (1996), the primary relaxation techniques are formed by two main approaches, namely the somatic and cognitive approaches, which can also be combined in the practice.

The somatic approach refers to bodily relaxation through tension reduction, such as progressive muscle relaxation or breathing exercises. Progressive muscle relaxation - the most commonly used relaxation training consists of slowly tensing and releasing the muscles from head to toe individually, both for a few seconds. Breathing exercises can include exercises consisting of slow breathing, deep breathing or abdominal breathing, characterized by breathing in deeply into the stomach. Although breathing exercises can be enough to induce a state of relaxation and well-being, paying attention to the breath is an essential feature of most relaxation exercises and is often combined with other relaxation techniques or mindfulness sessions. (Whittingham, 1996)

The cognitive approach refers to relaxation through thoughts or mental images and include cognitive methods, such as autogenic training or visualization/imagery exercises. Based on autosuggestion, autogenic training is characterized by people being immersed in a hypnotic state through self-suggestion and visualizations of bodily perceptions, such as heaviness and warmth of the body (Pagnini, 2019).

Based on these methods, basic mindfulness practice includes both somatic and cognitive approaches. Specifically, meditations starts with breathing exercises to practice focus on one’s breath. Besides, as the mind naturally wanders, the awareness of the contents of the mind is practiced and the time, as well as the shift of focus back to the breath. This process is mostly followed by a body scan to and can further be followed by visualizations. (Pagnini, 2019)

Based on these techniques, contemporary psychology has developed numerous methods, aiming to enhance awareness and functional responding to internal events, which used to contribute to psychological difficulties (Bishop et al. 2004; Kabat-Zinn 1990). These include, for instance mindfulness-based stress reduction (MBSR) (Kabat-Zinn, 1982), mindfulness-based cognitive therapy (MBCT) (Segal, Williams & Teasdale, 2002), acceptance and commitment therapy (ACT) (Hayes et al. 2006), contextual anger regulation therapy (CART) (Gardner & Moore, 2013) or mindfulness-acceptance-commitment approach (MAC) (Gardner and Moore 2004). Among those, mindfulness-based stress reduction (MBSR) and mindfulness-
based cognitive therapy (MBCT) are the most pervasive and well-established mindfulness interventions and are most often associated with contemporary models of mindfulness (Economides, Martman, Bell, & Sanderson, 2018). Whereas, the MBSR approach focuses on body-mind awareness and practicing the nonjudgmental focus on the present moment, as well as the reduction of reactivity through meditation and relaxation practices (Kabat-Zinn 1990), the MBCT approach is based on the integration of MBSR with cognitive behavioral therapy (CBT) and focuses on the acceptance rather than the change of thoughts and its content by encouraging individuals to see their thoughts as just thoughts instead of reflections of reality (Rodrigues et al., 2017). The approach is primarily geared towards the reduction and prevention of depression relapse (Segal et al., 2002).

**Mechanisms of Change**

Studies have been proving promising results for a wide range of disorders due to MBIs, especially the ones that involve high levels of rumination in one form or another (Gardner et al., 2014). For instance, positive results have been proved for attention-deficit-hyperactivity-disorder, bipolar disorder, panic disorder, generalized anxiety disorder, eating disorder, psychotic disorders, substance or alcohol related disorders and chronic depression (Keng et al., 2011).

The positive effects on various conditions result from the specific mechanisms of change or benefits (some of them have already been mentioned above) due to the practice and cultivation of mindfulness, which specifically include intention and motivation, attention and emotion regulation, memory extinction and reconsolidation, prosociality, and non-attachment/decentering (Vago & Silbersweig, 2012).

Intention and motivation changes refer to the capacity to engage with a certain experience, without attaching or averting oneself to it excessively, hence it refers to the capability of self-regulation (Vago & Silbersweig, 2012). Attention regulation refers to the capacity to shift awareness between various stimuli that are subject of the mind. It is an essential skill in order to effectively manage and control impulses and responses (Vago & Silbersweig, 2012). Being closely related to attention or self-regulation, emotion regulation refers to the improvement in awareness, clarity, acceptance, and eventually, the expression of emotion (Carmody, Baer, Lykens & Olendzki, 2009; Vago & Silbersweig, 2012). Referring to the relationship between
contextual cues and their subjective meaning to someone, memory extinction and consolidation involves developing new associations between particular stimuli and behavioral responses (Quirk & Mueller 2008; Vago & Silbersweig 2012) which can positively affect the reduction in rumination about the self. The proposed mechanism of prosociality is concerned with the compassion with self and others, as well as enhanced empathic behaviour. Finally, non-attachment or decentering refers to an individual take an observer perspective of its immediate experiences and includes the understanding of habitual cognition patterns, emotions, and behavior. Besides, it has been shown that it naturally results in a de-automatization of previously automatic processes which control an individual’s perception, as well as their behavioral responses. (Vago & Silbersweig, 2012)

**Beneficial effects of Mindfulness-based Interventions**

Clinical intervention studies have been proving the beneficial effects of MBIs, and thus, have shown that it is an effective intervention for treating both psychological and physical symptoms (e.g. Baer, 2003; Bishop, 2002). The results specifically support a good efficacy in reducing stress and anxiety (Manzoni, et al., 2008; Khoury et al. 2015). In addition to the psychological domain, meditation practice can demonstrably improve energy levels and enhance the immune system and decrease creative protein levels that are associated with inflammation (Hoffmann, Swayer, Witt & Oh, 2010).

For instance, Kabat-Zinn et al. (1992) investigates the effectiveness of mindfulness on patients who suffer from anxiety disorders and finds out that after completing a MBSR program almost all of the participants experienced a significant decrease in anxiety and depression.

A MBSR study by Hoge Bui, Marques, Metcalf, Morris and Robinaugh (2013) which aims to understand internal present-moment experiences by practicing body scanning and breath awareness, it is observed that mindfulness meditation training significantly lessens anxiety symptoms for patients with general anxiety disorder (GAD).

Furthermore, while assessing the effects of MBCT on emotional reactivity, Britton, Shahar, Szepsenwol and Jacobs (2012) find that mindfulness meditation training tends to reduce emotional reactivity despite experiencing negative affect.
Besides, several researches have shown that it seems to be effective in the treatment of phobias, such as social phobia, dentist phobia, snakes phobia, agoraphobia, as well as fear of flying (Lundgren, Carlsson & Berggren, 2006).

Furthermore, not only within clinical contexts, but also research among non-clinical community samples indicate that various mindfulness-based relaxation techniques and methods have a positive impact on various aspects, including satisfaction, anxiety, stress or quality of life (Manzoni et al., 2008). For instance, studies investigated the effect of relaxation practices among high school and university students, nurses, employers, or athletes (Francesco, Mauro, Gianluca, & Enrico, 2010).

More recent studies on mindfulness have started to investigate the potential of mindfulness in the workplace (Dane, 2011; Glomb et al., 2011). Although empirical research is still scarce, the practice of mindfulness in the business world is more present than ever, considering the fact that many companies are offering meditation programs or meditation rooms within the company (Hafenbrack, 2017). Research has shown that mindfulness has a relevant role in work-related outcomes such as task performance (Dane, 2011) or employee well-being in terms of physical and psychological health (Glomb et al., 2011). Besides, Hülsheger, Alberts, Feinholdt, and Lang (2013) study the role of mindfulness in the workplace, more particularly on emotional exhaustion and job satisfaction and find that participants practiced mindfulness, experience significantly less emotional exhaustion and more job satisfaction than the participants who did not. Congruently, a study by Kersemaekers et al. (2018) investigates the effects of mindfulness practices towards work related aspects and concludes that the outcomes include greater reductions in burnout and perceived stress, improvements in mindfulness, well-being, as well as an increase in team and organizational climate and personal performance. Another interesting finding within the research of mindfulness in the business and decision-making context is found by Alfonso et al. (2010) who study the efficacy of meditation-based mindfulness on reducing executive and decision-making deficits. They find that mindfulness meditation complements one of the best-validated interventions for executive dysfunctionality, called Goal Management Training (GMT) by improving “(...) attentional scanning and “reading” of emotional signals involved in adaptive decision-making” (p. 78). These improvements in turn lead to an improved performance of working memory, response inhibition, as well as decision-making.
Furthermore, it has been shown that mindfulness can be applied to optimize sports performance. A study by Parnabas et al. (2014), for instance, investigates the effect of mindfulness practices on athletes’ sports performance and shows positive correlations between meditation and athletes’ performance, as well as between breathing techniques and athletes’ performance.

2.1.2. Mindfulness and the Airline Industry

2.1.2.1 Previous Work of Mindfulness in the Tourism and Airline industry

With the increasing knowledge about positive outcomes of mindfulness, the topic has gained more interest in various industries, including the travel/ tourism industry. Although only limited research has been conducted in this area, most focus has been put on the influence of mindfulness on tourist’s intentions and travel behavior regarding destination choice or loyalty, as well as on their experiences or satisfaction with an attraction or a destination (e.g. Taylor & Norman, 2019; Rubin, Lee, Paris, & Teye, 2016). Thereby, the studies refer to mindfulness as a trait construct, which does not include mindfulness meditation. For instance, a study by Rubin et al. (2016) investigates the influence of mindfulness services on tourists’ emotions, satisfaction and destination loyalty. As it has been shown that the act of giving attention to new external information provokes a mindfulness state in people due to a state of novelty seeking (Pagnini et al., 2019), mindfulness services in this study refers to certain orientation services, such as brochures, educational signs, legible maps or sensible storytelling about the destination. The authors argue that a satisfying travel experience which is mediated by mindfulness and tourist’s emotions causes greater retention of memories and perceptions about a destination, which can lead to more satisfaction and destination loyalty. They conclude that tourists’ emotions, resulting from mindfulness-oriented services, have a strong influence on their satisfaction, as well as destination loyalty. Similarly, a study by Loureiro, Stylos and Miranda (2020) explore the effect of mindfulness on tourists’ perceived travel experience. The results show the important role of mindfulness in shaping (a more positive) destination image, consisting of impressions, expectations and emotions, which in turn influences (increases) tourists perceived value regarding the destination experience. Another study by Taylor and Norman (2019) considers the influence of trait mindfulness during the travel anticipation phase on the traveler’s choice of destination, satisfaction and loyalty towards the
destination. The results show that mindfulness has a significant positive influence on these aspects during this phase.

Mindfulness in the airline industry has gained only very little attention in the literature. As mindfulness leads to greater attention and focus ability and hence, awareness of the present moment, few studies have been focusing on the effects of mindfulness on military, as well as airline pilots (e.g. Jha et al., 2015) as well as its influence on passenger or crew behavior (e.g. Gautam & Mathur, 2018). For instance, it has been found that mindfulness training increases pilots observation and focus and attentive skills, helps to create a relaxed and more flexible mind, as well as reduces stress and arousal, which can be particularly important in high-workload situations where attentiveness to the task is crucial (Jha et al., 2015). Further, a research by Gautam and Mathur (2018) examines how mindfulness strengthens psychological flexibility and how it is effective in improving decision making and among aircrew.

Based on the finding of other researches which showed that high mindful consumer are more likely to invest in a quality relation with a company if the qualities are perceived as positive, Fiahlo (2015) finds that passenger with a higher level of trait mindfulness are likely to be more committed to maintain a good relationship with an airline they have had a good experience with before. Besides the study indicates that if a high mindful consumer tends to be more committed in having a good relationship, it is more likely that he/she will to be loyal to the airline compared to less mindful consumers.

### 2.1.2.2 Mindfulness as a potential Ancillary- and In-flight Entertainment Service

Initiated by (and mostly associated with) low-cost carriers (LCCs), unbundling the airline ticket and creating fee-based ancillary products and services has become a major new concept in order to generate additional revenues (O’Connell, 2011; Warnock-Smith et al., 2017). With ancillary revenue being defined as “(…) revenue beyond the sale of tickets that is generated by direct sales to passengers, or indirectly as a part of the travel experience”, unbundling the fare, thus, implies to charge a fee for products or services which before used to be inclusive and complimentary, such as booking and reservation channels and changes, checked baggage, seat selection, meals or IFE (O’Connell & Warnock-Smith, 2013, p. 12).
Ancillary revenue can be grouped into three categories: a-la-carte or commission-based activities and frequent flyer programs. A-la-carte entity refers to services that are offered mainly in relation to the pre- and in-flight experience, which comprise unbundled items for sale such as checked baggage, seat selection, food and beverage, in-flight WIFI or any kind of in-flight entertainment. A-la-carte ancillaries, however, can also include punitive charges that are generated by booking changes or cancellation fees, airport check-in- or credit card fees for instance. (Warnock-Smith et al., 2017) Whereas the unbundled items used to be included in the ticket price, commission-based or also called third-party ancillaries are created through cooperation between airlines and related companies and is comprised of the sale of products or services that go beyond the airline’s services (Warnock-Smith et al., 2017). Frequent flyer programs (FFPs) contain the sale of points and mileage to program partners and members in order to generate loyalty, as well as additional revenue by allowing passengers to collect and redeem miles out of a wide variety of non-flying activities. While bonus points are seen as incentives for high value travelers, FFPs provide a great opportunity to develop a strong and personalized relationship with the customer and hence, have become a core competency as well. (O’Connell & Warnock-Smith, 2013)

As their research has proven a positive correlation between airlines with a high percentage of ancillary revenues and airlines with high percentage of revenue from operating profits, O’Connel & Wannock-Smith (2013) suggest airlines to emphasize up- and cross-selling of air and non-air ancillary products and services in order to increase the share of wallet per passenger and profits.

2.1.2.3 The Role of Anxiety and Stress during Air Travel

Emotions of anxiety have been repeatedly discussed within various fields of interests, such as health- and psychology (e.g. Baer et al, 2006), consumer behaviour (e.g. Brown, 1999), or tourism (e.g. Arnould & Price, 1993; Kim et al., 2016). It can be defined as the subjective experience of unpleasant feelings, such as stress, fear, or panic (McIntyre & Roggenbuck, 1998). In fact, Reisinger and Mavondo (2005) state it is a normal reaction to stress, which evolves out of feelings of uncertainty. Therefore, it is closely associated with an individual’s potential or actual risk perception (Reisinger & Mavondo, 2005), which is why it also refers to the fear of negative consequences (Gudykunst & Hammer, 1988). Thus, anxiety is evoked to a
great extent by rumination or repetitive thoughts about future negative events (Hafenbrack, 2017).

Although airplanes are proven to be the safest among all transport modes (IATA, 2019), a large percentage of the population worldwide feel mentally unsafe during air travel (Van Gerwen & Diekstra, 2000). In fact, whereas a survey conducted in 2015 on 1061 individuals in the UK indicates that 43% of respondents are very worried or even quite worried when flying (Statista, 2015a), a study among French respondents similarly revealed that 42% of the participants are feeling anxiety to some extent when flying (Statista, 2015b).

Thus, the importance of understanding anxiety and travel-related stresses, and subsequently examining potential solutions, has increased researchers’ interest in the subject (e.g. Bogaerde & De Raedt, 2011, Batouei, Irammanesh, Nikbin & Hyun, 2019). However, the majority of studies have been conducted in the fields of travel medicine, psychiatry, or travel security (e.g. Bor, 2007; McIntosh, Swanson, Power, Raeside, & Dempster, 1998; Meyerbröker, Morina, & Emmelkamp, 2018), whereas it has been largely overlooked by scholars in other fields, such as service management, which could contribute to the understanding and handling of passengers’ flight-related stresses and anxieties.

Researchers argue that responses to anxiety consist of mainly three interrelated elements, namely physiology, behaviour, and cognition (e.g. Van Gerwen, Spinhoven, Van Dyck, & Diekstra, 1999; Kraaij, Garnefski, & Van Gerwen, 2003). Physiological or somatic reactions, such as hypoxia, a condition when oxygen saturation in the blood is low (Bogaerde & De Raedt, 2011) can include muscle tension, shortness of breath or heavy breathing, heart racing, sweating, dizziness, flushed or pale face or abdominal and intestinal discomfort. Further, from a behavioral perspective it is suggested by several studies, that flying “…(…) becomes a conditioned stimulus through association with fear-related sensations, which eventually cause fear as a conditioned response” (Batouei et al., 2019, p. 710). Lastly, the cognitive perspective refers to thoughts in passengers’ minds related to dangers of flying, for instance about the airplane crashing or fear of dying, which oftentimes results in distress and anxiety (Van Gerwen et al., 1999; Kraaij et al., 2003), as well as psychological reactions, such as impaired memory, narrowed perceptions, negative expectancies and subjective self-threat or perseverative thinking (Silverman & Gendreau, 2009).
Reasons for feelings of stress, discomfort or phobias can occur due to various reasons and can contain many elements. Whereas states of little discomfort or a lower level of anxiousness can be triggered by the environment and travel situations, such as bad weather conditions, turbulences, pressure changes, delays, ambiguity and absence of information, unfamiliar environment or bad service quality (Bor, 2007), or are derived from ambient environmental stressors, such as cabin pressure, engine noise, aircraft motion, noise, vibration (Hinninghofen & Enck, 2006; Pennig, Quehl, & Rolny, 2012), most of the higher level anxieties comprises several underlying fears, including a combination of ambient stressors and factors not necessarily being related to flight, such as fear of heights, enclosed spaces, confinement, crowded conditions, personal instability and lack of control (Batouei et al., 2019). Besides, Clark (1999) proposes that fear and panic attacks can be caused due to the aversive bodily sensations caused by hypoxia, which might be just misinterpreted as signs of fear and which in turn lead to even more bodily symptoms, resulting in a continuous cycle.

The extent of flying related fear and stress levels ranges from very mild or moderate feelings of discomfort and thus, only few physiological sensations or psychological reactions (e.g. sweating during take-off and/or landing), to a considerable discomfort and up to extreme fear or flight phobia feelings with more intense physiological and psychological reactions (e.g. heart racing and self-threat) or even behavioral reactions, such as the avoidance of flying at all (Faraci et al., 2011).

In that sense, research has shown that the intensity in passengers somatic sensations and thus, in-flight anxieties are influenced by an individual’s anxiety sensitivity (AS). Defined as the tendency to interpret anxiety-related somatic sensations as threatening (Reiss, 1991), anxiety sensitivity has been shown previously associated with the occurrence of panic attacks (Vanden Bogaerde & De Raedt, 2011). In fact, while investigating the relationship between bodily sensations and in-flight anxiety, Vanden Bogaerde & De Raedt (2011) show that people with higher anxiety sensitivity respond more anxiously to somatic symptoms, indicating that AS constitutes a moderator in fear of flying.
2.1.2.5 On-the-spot Mindfulness

Reducing feelings of anxiety or unpleasant feelings constitutes great interest of airlines in order to enable passengers a pleasant travel experience, which in turn might result in an increased level of customer satisfaction and further benefits. Therefore, measures should be taken to increase comfort and well-being during a flight. (Batouei et al., 2019)

Reflecting the increasing popularity of mindfulness practices, mindfulness training programs are currently offered across a wide range of settings, including hospitals and clinics, schools, universities, workplaces, and even prisons (Kabat-Zinn, 2003). Whereas the typical mindfulness-based intervention programs are carried out for several weeks, the occurrence of mobile mindfulness apps in recent years enable the practice of mindfulness “on-the-spot” (Plaza, Demarzo, Herrera-Mercadal, & Garcia-Campayo, 2013; Hafenbrack, 2017). On-the-spot mindfulness intervention, thus, is the process in which an individual induces a state of mindfulness when it is needed in a specific situation (Hafenbrack, 2017).

Despite the importance and increasing utility of mindfulness in specific situations, the literature has devoted very little research on mindfulness meditation being used as an on-the-spot intervention. One reason for this is that the quick adoption of mobile mindfulness practices is quite a new concept which has only become popular within few recent years.

However, it has been proven that a single session (three to 30 minutes) of mindfulness awareness meditation can lead to beneficial cognitive, affective, and behavioral changes immediately after (Arch & Craske, 2006; Hafenbrack, Kinias, & Barsade, 2014; Winning & Boag, 2015), including reduced sensitivity and reactivity to negative stimuli, improved focus, and reduced retaliatory behaviors (Hafenbrack, 2017). Similarly, Hafenbrack (2017) proposes that on-the-spot-mindfulness reduces the occurrence or intensity of subjective self-threat, induced by a higher level of (anxiety) sensitivity. Being defined as the presence of adverse circumstances (Staw, Sandelands, & Dutton, 1981) or more specifically as “…(…) the intrapsychic experience of perceiving past, present, or (usually) future harm to oneself due to adverse circumstances (…)” (Hafenbrack, 2017, p. 120), threat is likely perceived by anxiety passengers during the air travel (Vanden Bogaerde & De Raedt, 2011).
The concept of self-threat relies on the neuroscientific findings suggesting that people tend to be more self-focused and sensitive when focusing on past or future related situations compared to the present moment (Hafenbrack, 2017). As it has been shown that focus on the future and/or past tend to evolve around less-pleasant affective states, it is likely that individuals mind-wander to unpleasant or adverse situations or circumstances (Hafenbrack, 2017). As Gardner et al. (2014) states “the fusion of the self and one’s negative thoughts, along with ruminative processes, have been shown to play a key role in increasing both negative affect and a cognitive vulnerability to psychopathological concerns.” (p.332)

Hafenbrack (2017) suggests a reduction of self-threat intensity due to mindfulness through three essential mindfulness implications. First, through the increasing present awareness, people may reduce how much they think about self-threatening things in the past or future as the focus on the present moment implies the interruption of rumination and worry which are not occurring in the present moment (e.g. about potential airplane crash, not being able to move due to limited space). Besides, the present and nonjudgmental observation and awareness of one’s thoughts and feelings and their acceptance as just mental events, rather than as reality, may reduce sensibility and the focus oneself, meaning if a stimulus is objectively threatening, people may be less concerned due to less or no self-focus. Thus, one can withhold negative thought patterns more easily (Hoge et al., 2013). And finally, through the nonjudgmental acceptance of the present moment, automatic reactions are lessened as individuals are able to pause before even deciding how they feel or respond (Glomb et al., 2011), similar to the saying that pain is unavoidable, but suffering is a choice (Gelles, 2015). The mental space created by this process is likely to reduce the extent of the negative stimuli and therefore, leads to greater psychological resilience (Hafenbrack, 2017).

Theoretical work, congruently, has been proven that mindfulness meditation reduces the extent to which a current experience is associated with one's self (Farb et al., 2007), quiets the self or the ego (Brown, Ryan, & Creswell, 2007) and significantly reduces automatic reactivity to threat (Hafenbrack, 2017), thus fostering a greater sense of calm and well-being (Keng, Smoski, & Robins, 2011).

These findings suggest that self-induced on-the-spot mindfulness likely enhances passengers’ positive emotional state by increasing focus on the present moment, thereby reducing
sensitivity and reactivity to negative stimuli due to reduced mind wandering and rumination (Hafenbrack, 2017), which according to Clark’s proposal (1999) in turn reduces bodily sensations of fear. As a consequence, the circle of negative affect due to the potential misinterpretation of bodily sensation and flight anxiety can be interrupted and thus, airline passengers’ anxiety can be reduced, whereas their well-being, comfort and ultimately their satisfaction can be increased.

2.1.2.6 Mobile Mindfulness

Usually, mindfulness interventions rely on trained meditation teachers to lead the practices live in-person or online settings. As everything and everyone becomes more digital oriented, mindfulness training delivered via a self-guided smartphone app has become a convenient and increasingly popular alternative to live training sessions (Plaza et al. 2013). According to Bostock, Crosswell, Prather & Steptoe (2019) the main benefit of app-based interventions, also called as e-mindfulness (Tedder, Shi, Si, Franco, & Chen, 2015), is the ability for participants to control where and when they access the intervention, offering the possibility to self-induce a state of mindfulness when needed the most. Further, Economides et al. (2018) mention less time demand, more affordability, and perhaps more engagement as beneficial aspects of mobile mediums.

The popularity can also be seen in the number of downloads for the most famous meditation apps Headspace and Calm. After being founded in 2010 in the UK, Headspace meanwhile exhibits more than 65 million downloads and surpassed 2 million subscriptions until now (Headspace, 2020). With the same amount of approximate subscribers, US competitor Calm, founded in 2012, can even surpass the number of downloads compared to Headspace by exhibiting more than 80 million downloads, making it not only the number one mindfulness app for meditation, sleep and relaxation on the market, but also one of the fastest growing private US companies (Calm, 2020). The apps feature a variety of guided mediation sessions including mainly breathing and body awareness and relaxation exercises created for various life situations, such as sleep-, stress and anxiety or work meditations (Headspace, 2020). Whereas both apps offer basic meditation training for free, more advanced meditation sessions and exclusive content, such as sleep stories, calming nature scenes, health videos or a breathing tool (Calm, 2020) are only available for subscribers.
Generally, app-based treatments for (mental) health improvements are becoming a more and more prevalent and appreciated method of service delivery (Donker et al., 2013). Although, research on the efficacy is still limited, few studies investigating the use of smartphone apps for mindfulness interventions have found the same beneficial outcome in terms of subjective well-being, depressive symptoms, distress and compassion, compared to traditional methods (Economides et al., 2018).

Besides, despite the increasing importance of mobile apps for airline companies as a new ancillary revenue stream, they are also viewed as a potential source for passengers’ upgraded and enhanced IFE and flight experience. Several apps have been integrated into airlines IFE program to offer an upgrade service to passengers. For instance, app services that allow passenger bidding within different auctions, enabling the possibility to win first- or business class seats, have been created, as well as apps allowing passengers to swap seats with other passengers for a fee. (Avram, 2017) Therefore, a mobile Mindfulness Service can also be geared for passengers with a lower level of anxiety, and simply follow the purpose of inducing an even more calm and positive state of well-being.

**Conceptual Framework and Hypothesis Development**

In the following chapter the conceptual framework of this research will be introduced, as well as the relevant literature which constitutes the base of the developed hypothesis.

**3.1 Conceptual Framework**

The starting point of the model proposes that during a flight, airline passengers are in a situation in which they tend to experience some extend of stress, which can last from feelings of discomfort and nervousness to severe anxiety. In fact, in a situation like this, it can be that individuals tend to experience heightened negative affect and/or subjective self-threat (Hafenbrack, 2017). Anxiety or these negative emotions in general can be triggered for instance through environment and travel situations (Bor, 2007) or ambient environmental stressors (e.g. Hinninghofen & Enck, 2006).

This research proposes that if people are in a stressful situation like this, they can self-induce a state of calmness and contentment by mindfulness meditation offered as a service by the airline.
This will likely help passengers to get into a state of present awareness and reduce past or future related thoughts (of anxiety) (Hafenbrack et al., 2014), which leads to reduced feelings of negative affect and perhaps self-threat (Hafenbrack, 2017). Hence, it is assumed that this state of mindfulness leads to higher passenger satisfaction during the flight, as anxiety and stresses are reduced or eliminated, and passengers experience a more pleasant flight.

Therefore, it is proposed that a Mindfulness Service increases passengers’ satisfaction with the flight experience. Besides it is assumed that a higher level of anxiety leads to higher satisfaction with the Mindfulness Service. Moreover, the increased satisfaction may in turn have a positive influence on passengers’ future airline purchase intention, as well as their willingness to pay a fee for the Mindfulness Service. In the following graphic, the research framework is outlined.

**Research Model 1**

![Research Model 1](image1)

**Research Model 2**

![Research Model 2](image2)

Figure 1: Research Framework

Furthermore, previous studies have been showing differences in the characteristics and expectations/ perceptions of long- and short-haul travelers in terms of product and service quality (Lo & Lam, 2004) and value (Pine & Gilmore, 1999). For instance, Lo and Lam (2004) show that long-haul travelers generally are more concerned about product features and quality of the airline, whereas short-haul travelers seem to be more concerned about prices.
Furthermore, Pine and Gilmore (1999) argue that due to the rise of the “experience economy”, hedonic value such as in-flight performances of staff, amenities or services and in-flight comfort and entertainment is regarded a key factor for service provision in the airline industry. Moreover, studies have shown that generally, long-haul travelers are less price sensitive compared to short-haul low-cost travelers (Crouch, 1994). Therefore, it can be assumed that the length of haul affects passenger perceptions and valuations regarding products and services and thus, their satisfaction, willingness to pay and future purchase intentions. Consequently, both research models will be tested for both a short- and long-haul flight setting. While the short-haul flight setting refers to a flight up to three hours, the long-haul flight setting refers to a flight of minimum of six hours.

3.2 Hypothesis Development

In the following section the hypotheses researched in this study will be outlined and relevant literature including theoretical concepts for each hypothesis will be reviewed. Thereby, arguments from both secondary research and common logic will be provided in order to support the development of the hypotheses.

3.2.1 Mindfulness as a Service (MaS) and Satisfaction

The goal of every business is to develop product and services with which they are able to achieve three essential goals, which is satisfying customers’ needs and desires, outperforming competitors and generating profitability. Thereby, the latter can only be achieved by the former, making customer satisfaction a fundamental aspect for every business (e.g. Hallowell, 1996; Zeithaml, 2000). In particular, research has proven satisfaction as a driver for various business goals, including positive word-of-mouth (WOM), advertising, purchase intention or repurchase behavior and loyalty (Hansemark & Albinsson, 2004), reduced price sensitivity and hence, increased cross- and up-selling opportunities (Matzler, Fuchs & Schubert, 2004).

The term satisfaction can be considered from two perspectives, namely the transactional- and the cumulative perspective, as well as from different viewpoints (individual, firm or society). The transactional perspective refers to satisfaction as a result of a service encounter with a specific employee or a website (Loueiro, Miranda, & Breazeale, 2014). Within the cumulative
perspective, satisfaction is seen as an overall evaluation of a series of consumption experiences with a product or service over time (e.g. Oliver, 1999; Loureiro et al., 2014).

Derived from the expectations-disconfirmation paradigm by Oliver (1980), which assumes that consumers formulate an evaluative judgment by comparing their expectations they have had before the consumption of a specific product or service with the perceived performance of the product or service, research argues that satisfaction is influenced by both cognitive as well as affective antecedents. Whereas cognitive antecedents can be the result from a comparison between service expectations and perceived service performance (Jones, Reynolds, & Arnold, 2006), affective antecedents refer to emotions which are used as a source of information within the process of forming evaluative judgement (Mano & Oliver, 1993, Menon & Dubé, 2004).

In fact, further research has shown more intense positive emotions lead to higher satisfaction and conversely for negative emotions (Oliver 1999).

A suitable definition of satisfaction based on the expectation-disconfirmation paradigm, is given by Hansemark and Albinson (2004) who define customer satisfaction as the overall customer attitude towards a service provider, or more specifically an emotional reaction to the difference between the consumer’s anticipation and what they actual receive regarding the fulfilment of needs, goals or desire.

Besides, the definition by Anderson (1994) happens to be one of the best suited for the purposes of this research. He defines consumer satisfaction as an evaluation dependent on one’s perceived quality or value, as well as the degree of discrepancy between actual and expected quality.

Consequently, according to the definitions, consumers’ expectations, as well as product or service quality constitute essential antecedents of satisfaction (Cronin & Taylor 1992, Parasuraman, Zeithaml & Berry, 1988; Park, Robertson & Wu, 2004).

With previous research emphasizing the notion of service quality, defined as a global judgment or attitude which results from a comparison of purchase expectations or an expected service with post purchase perception / performance of the service and thus, as an evaluation of the performed service in regard how it fulfills the expectations of customers (Grönroos, 1982, Parasuraman et al., 1988), offering high quality service to customers has become a critical differentiating tool for service firms to strengthen their competitive advantage (Park et al., 2004).
Way less attention has been put on consumer expectations in terms of what consumers think they will and what they think they should receive from service providers. Prior research has divided expectation into different classes of expectations. Especially, two expectation classes, namely predictive (will) expectations and desired (should) expectations, can be distinguished (Devlin, Gwynne & Ennew, 2002). Predictive expectations are influenced by explicit and implicit service promises, word-of-mouth and past experiences and therefore, refer to consumers’ beliefs concerning the probabilities of what the consequences of an event will be (Oliver, 1980). Desired expectations refer to what consumers would like to receive or what they think they should get (Parasuraman et al., 1988), thus, they are impacted by personal needs, including physical, social and psychological desires of the consumer as well as their personal service philosophy (Zeithaml, Berry & Parasuraman, 1993). Although Boulding, Kalra, Staelin, & Zeithaml (1993) argue that as long as predictive expectations (will expectations) are met, it is likely that consumers feel satisfied, even if they don’t perceive the service encounter to be of high quality. However, in order to differentiate themselves from competitors’ long term, literature stresses the importance for firms to create superior customer value (Cronin & Taylor, 1992), which requires the understanding of consumers (unexpressed) needs or desired expectations (should expectations) (Zeithaml et al., 1993).

Moreover, research has shown that value has a direct impact on customer’s satisfaction with a supplier (Anderson et al., 1994). In fact, Hallowell (1996) argue that satisfaction results from a customer’s perception of perceived value.

Value can be conceptualized in two main constructs, namely the uni-dimensional and the multi-dimensional constructs (Sanchez-Fernandez & Iniesta-Bonilo, 2007). Similar to the expectation-disconfirmation paradigm, the uni-dimensional conceptualization defines value as a benefit-sacrifice discrepancy or in other words, what customers get in terms of benefits relative to the costs or sacrifices they face in order to get it (Zeithaml et al., 1993). Within the multidimensional conceptualization, value is viewed as a composition of utilitarian and hedonic value. Whereas, utilitarian value refers to task-oriented and cognitive perceptions of airline services, such as cost, alliance, network, flexible schedules, in-flight special meals, memberships, hedonic value includes passengers' entertainment and emotional involvement, such as in-flight performances of staff or amenities, layout and facilities, employee uniform or aircraft wrappings for instance. (Pine & Gilmore, 1999).
Although several factors influence customers’ satisfaction level with an airline, including, among others, ticket price, reservation channels and payment methods, flight conditions (schedule, frequency, connections), cabin facilities and ground services (Medina-Muñoz, Medina-Muñoz & Suárez-Cabrera, 2018), it has been shown that passengers greatly value in-flight service. In fact, Park et al. (2004) argue that passengers tend to evaluate an airline to great extent based on their satisfaction level with the in-flight service. Whereas, in-flight service also include meal and beverage services, as well as staff services (including their availability and friendliness), in-flight entertainment (IFE) services have been shown to contribute heavily to passengers' satisfaction with airline services and thus, has become one of the crucial areas for which airline companies seek most differentiation in (Almadari, 1999).

However, only few studies have been focusing on identifying passengers’ most valued in-flight services. Whereas, Tsaur, Chang, and Yen (2002) find that seat comfort and crew responsiveness is among the most essential services affecting passengers’ in-flight service evaluations and satisfaction, Chen and Wu (2009) conclude that meal service has the highest perceived value for passengers, followed by IFE. Congruently, in a study by Almadari (1999), airline passengers were asked about their most preferred activities during a flight. The results showed that passengers mostly prefer to relax or sleep during the flight. Being entertained during a flight was found out to be the second most favored activity on board, followed by reading and working. He explains the outcome by the public trend and desire towards entertainment in general, which is also reflected in the entertainment industry. According to Almadari (1999), entertainment is especially important during long-haul flights and in the usual economy class due to the seat configuration and the little personal space, where it can be difficult for passengers to sleep or relax.

Similarly, Richards, Jacobson, and Kuhlthau (1978), as well as Ahmadpour, Robert and Lindgaard (2016) find that passenger increasingly value comfort on board. In fact, they find that lower passenger comfort ratings are associated with less willingness to fly again. Similarly, in order to attract passengers more, Ideaworks (2012) emphasizes the offering of purchasable ancillary services that bring more value adding comfort and convenience amenities. Vink and Hallbeck (2012) define comfort as “(...) a pleasant state or relaxed feeling of a human being in reaction to its environment.” (p. 271) and can occur on body and mind level. Whereas the former refers to the physical aspect of comfort concerning bodily support and energy, the latter refers to a state of psychological ease that is accompanied by feelings of security,
tranquility and relief. Patel and D’Cruz (2018) suggest that the level of comfort in an airline context is influenced by internal (personal) factors, such as characteristics or current state or needs, as well as external stimuli, including personal travel context, perceived control, pre- and in-flight environment, interaction with others, or activities (Patel & D’Cruz, 2018). With researchers previously having acknowledged the power of distraction in terms of feelings of discomfort and pain (e.g. Dahlquist et al., 2007; Strick, Holland, Van Baaren, & Van Knippenberg, 2009), interacting with others or being occupied by activities seem to be an especially important influence towards an enhanced comfort level. Thus, engaging in activities through IFE content, likely decreases passengers’ perceived discomfort and thus, increases their satisfaction during a flight (Patel & D’Cruz, 2018). Especially with entertainment being regarded as a form of activity that gives pleasure and delight to an audience while holding or keeping their attention and interest, it can be viewed as part of hedonic value, which is a crucial key component in value creation (Pine & Gilmore, 1999). Therefore, a mindfulness program as part of the IFE program, is proposed to constitute a valuable offering for airline passengers.

Based on this, as well as on described outcomes of (on-the-spot) mindfulness meditation mentioned in the literature review, it is proposed that a Mindfulness Service offered to the regular in-flight entertainment program increases passenger satisfaction on board. Thus, the first hypothesis is called:

**H1:** An additional Mindfulness Service in the IFE program has a positive influence on passengers’ satisfaction with the in-flight experience.

### 3.2.2. Anxiety and Satisfaction

It is well recognized in the literature that emotions, defined as “[...] a mental state of readiness that arises from cognitive appraisals of events or thought [...]”, play a critical role in the prediction of consumer behavior and decision-making (Bagozzi, Gopinath, & Nyer, 1999, p. 184). In fact, individuals’ choices are influenced by emotional factors such as fear, worry or love, rather than by rational considerations (Kahneman, 2003).
Numerous academic studies have been stressing the importance of emotions in a consumption setting (Alford & Sherrell, 1996; Bagozzi et al., 1999; Dubé & Menon, 2000), whereby great focus has been put on the consequential effects of emotions. In particular, it has been proven that emotional feelings can be viewed as predictors of customer satisfaction (Mano & Oliver, 1993), as well as behavioral intentions (Morris, Chongmoo, Geason, & Jooyoung, 2002) and loyalty (Hansemark & Albinsson, 2004). Dubé and Menon (2000) for instance, find that both positive and negative emotions impact consumer satisfaction, whereby an increase in positive emotions leads to increased satisfaction and vice versa.

On the other hand, with emotions being such crucial factors influencing an individual evaluative judgements, several researches have been investigating negative emotions, including hate or anger, resistance and fear or anxiety (e.g. Dallimore, Sparks, & Butcher, 2007; Dubé & Menon, 2000) and its influence on undesired outcomes, such as lower customer satisfaction, buying resistance, or negative word-of-mouth (Dallimore et al., Butcher, 2007; Dubé & Menon, 2000).

Anxiety has been of special interest to many scholar and has been discussed in various disciplines, such as consumer behaviour (e.g. Brown, 1999; Viswanathan, Rosa, & Harris, 2005), computer and internet use (e.g. Hackbarth, Grover, & Yi, 2003) as well as tourism and leisure travels (e.g. Arnould & Price, 1993; Kim et al., 2016). Already defined in the literature review (chapter 2.1.2.3) as the subjective experience of unpleasant feelings, such as stress, fear, or panic (McIntyre & Roggenbuck, 1998), anxiety is closely associated with an individual’s potential or actual risk perception (Reisinger & Mavondo, 2005), which is why it also refers to the fear of negative consequences (Gudykunst & Hammer, 1988).

In the tourism or travel context, most research has been concerned with the costs of anxiety in terms of reduced demand due to switching to competitors (Bosch, Eckard & Singal, 1998; Wong & Yeh, 2003) or certain characteristics, such as anxiety (Webber, 2009), whereas only few have looked into the level of anxiety impacting service expectations, satisfaction, behavioral intentions or loyalty (Fleischer, Tchetchik & Toledo, 2012; Batouei et al., 2019). The study by Batouei et al. (2019) investigates whether flight anxiety and satisfaction are related to travelers’ loyalty, finding that anxiety has a negative effect on satisfaction. Similarly, Johnson, Sivadas, and Garbarino (2008), as well as Bogicevic et al. (2016) show a negative influence of anxiety on passenger’s satisfaction rating. Besides, after investigating differences
in passengers’ decision-making regarding choice of flights, a study by Fleischer et al. (2012) conclude that differences in choice of itineraries exist, depending on the level of passenger’s level of anxiety and the value they place on specific airline- and service attributes. In fact, the results show that anxiety passengers choose flights based not only on price and convenience but rather on flight attributes that reassure the extremely low risk of flying and or that help alleviate their fear. Thus, individual safety perception towards airlines constitutes a key factor for airline choice (Li, Phun, Suzuki & Yai, 2015). However, the findings suggest that the feeling of safety is not only necessarily influenced by presented objective risk probabilities of being involved in accidents, but also by a range of airline-, route- or service attributes affecting passengers’ perceived (subjective) safety. In that sense, the literature has suggested several proxies from which one can derive the airline’s unobserved safety. These include for instance, an airline’s financial condition, safety expenditure and crash history, as well as service quality (Fleischer et al., 2012).

Similarly, studies about anxiety customers in the service environment have emphasized service quality in terms of provider responses to customers emotions or physical state (Menon & Dubé, 2004; Batouei et al., 2019). Anxiety occurs due to attributions of negative events to uncontrollable circumstances and hence, is most often accompanied by low coping potential (Lazarus 1991; Smith & Ellsworth 1985). In other words, this means that anxious customers are likely to believe that they are unable to cope with a certain event or situation, and rather feel overwhelmed and/or helpless. Therefore, they tend to seek support or distraction from others in form of supportive responses which are perceived as coping assistance and as a sign of personal attention, reassurance or comfort within a certain situation, thus, anxious customers attach some significant value to it. (Menon & Dubé, 2004)

As mentioned above, customers use their emotions for forming an evaluative judgment, which eventually results in satisfaction or dissatisfaction. Thereby, the intensity of emotions has an effect on the evaluation, and thus, the level of satisfaction (Oliver, 1999). Hence, the more intense the negative emotion or in this case the anxiety, the lower the satisfaction with the travel experience. However, as providers’ responses are so highly valued by anxious customers, the role of provider responses take on a crucial mitigating role towards negative emotions like anxiety and therefore, contributes to consumers’ satisfaction. (Menon & Dubé, 2004) Besides, Menon and Dubé (2004) argue that anxieties, which are characterized by uncontrollable circumstances and even beyond the control of the service provider (in this case, the airline),
providers’ responses may be evaluated even more positively, implying that the intensity of those anxieties may have less importance towards the satisfaction level, but rather provide a greater opportunity for support providing responses to translate into higher satisfaction. Similarly, in alignment with previous consumer behaviour studies showing that a poor performance of frontline employees lead to low service quality, as well as to customer’s formation of stress and dissatisfaction (Wu, Tsai, Hsiung & Chen, 2015), the study by Batouei et al. (2019) revealed that flight crew’s competence and responsiveness is a crucial predictor of service quality, flight anxiety and passenger satisfaction. Considering these aspects, important payoffs, such as positive word-of-mouth, customer (re-)purchase intention or loyalty can be generated from further increasing the prevalence of responsiveness increasing measures (Menon & Dubé, 2004). It is assumed that in an in-flight context, this can be achieved through qualitative personal crew support or services that minimize or prevent passengers’ feelings of anxiety or enhance their well-being and comfort on board.

Based on these findings, it is assumed that generally passenger satisfaction is negatively affected by anxiety but can be increased through the right handling of services. In fact, it is proposed that a Mindfulness Service is of higher value to passengers with higher level of anxiety or discomfort and therefore, leads to higher satisfaction among passengers. This is hypothesized as followed:

H2: The satisfaction with the Mindfulness Service is higher for passengers with a higher level of anxiety.

3.2.3 Satisfaction and Airline Purchase Intention (API)

Generally, the notion of behavioral intention, such as purchase intention, is obtained from the theory of reasoned action (TRA) by Fishbein and Ajzen (1977). It describes a customer’s repurchase behavior for a brand, product or service (Russell Bennett, McColl-Kennedy, & Coote, 2007). Depending on the experience, customers’ behavioral intentions can be favorable or unfavorable (Zeithaml, Berry & Parasuraman, 1996). Whereas, favorable behavioral intentions are most likely to lead to positive word of mouth (WOM) about the firm, recommendations to others or behavioral loyalty, unfavorable intentions can lead to the exact
opposite. Consequently, behavioral loyalty can be operationalized as the service that first comes to a customer’s mind or is its first choice in the decision-making process and is strongly related to customer loyalty, which in turn is essential to business sustainability (Zeithaml et al., 1996). Therefore, the literature has investigated factors influencing consumers’ motivation to engage in a product or service purchase (Beneke, Flynn, Greig, & Mukaiwa, 2013; Garretson, Fisher, & Burton, 2002). Generally, purchase intention has been found to be a result of perceived product quality and product value, price fairness, as well as risk and level of trust in the vendor or service provider (Beneke et al., 2013; Maxwell, 2002). With services implying higher credence qualities and hence, come with a higher perceived risk, trust is known as an essential factor especially within the service sector (Darby & Karni, 1973). Moreover, emotions have been identified as an essential predictor of consumer behaviour (Bagozzi et al., 1999; Dubé & Menon, 2000). Therefore, the marketing literature largely focuses on the relationship of satisfaction, service quality and service value and its impact on purchase intention. Congruently to Beneke et al. (2013) who conclude that perceived quality, price and risk positively influence consumers’ perception of product value, which in turn leads to purchase intention, several researches highlight the role of perceived value and the resulting satisfaction as a crucial determinant of purchase intention (e.g. Cronin & Taylor, 1992; Oliver, 1980; Taylor & Barker, 1994). In fact, it is argued that the higher the perceived value of a product or service, the higher a consumer's satisfaction and the more likely it is that an individual will engage in a purchase (Zeithaml, 1988), which makes product value and satisfaction a key determinant of purchase intention (Zairi, 2000). In fact, Zairi (2000) states that the more satisfied a customer is with products or services offered, the higher the chances are for repeat purchase, customer retention, brand loyalty, and positive word of mouth marketing.

In the tourism literature, satisfaction has been as well empirically verified to lead to tourists’ repurchase intention (Baker & Crompton, 2000). For instance, whereas Meng, Liang and Yang (2010) show that perceived service value and satisfaction is not only related to cruise passengers' post-cognitive assessments, but also predicts best customers’ repurchase intentions for cruise ship passengers, Faullan, Matzler, & Füller (2008) indicate that ski resorts where satisfaction ratings are the highest also show the highest loyalty scores. Furthermore, while studying the relationship among service quality, satisfaction and loyalty in the Nigerian airline.
industry, Rahim (2016) proves a positive relationship between passenger satisfaction and loyalty.

Hence, it is assumed that an increasing passenger satisfaction due to the mindfulness service program (further referred to as mindfulness-based satisfaction) positively affects passengers’ future airline purchase intentions. Therefore, the following hypothesis is proposed:

H3a: Passenger’s mindfulness-based satisfaction has a positive effect on passenger’s future airline purchase intention.

Moreover, with anxiety connected to high risk and a low safety perception, especially in the airline industry after the September 11, 2001 incident (Webber, 2009), several studies have been investigating the impact of safety measures on passenger behaviour, including their willingness to pay for certain safety attributes (e.g. Fleischer et al., 2012; Molin, et al., 2017). For instance, Molin et al. (2017) investigate safety attributes and their impact in flight choice and consumer’s willingness to pay. They find that the individuals’ flight choices differ according to their perceived safety with an airline and attributes, such as airline brand and flight route. Besides, they find that consumers’ willingness to pay for improvements regarding certain safety attributes increase with lower initial perceived safety values. Congruently, a study by Fleischer et al. (2012) shows that willingness to pay for certain safety attributes is monotonically increasing with anxiety levels.

Therefore, it is suggested that anxiety as well has an impact on airline purchase intention.
With hypothesizing the positive influence of mindfulness-based satisfaction on airline purchase intention (H3a), while assuming that passengers’ satisfaction is influenced by passengers’ anxiety (H2), it is reasonable to propose that passenger’s mindfulness-based satisfaction functions as a mediator in the relationship between anxiety and passenger’s airline purchase intention. Therefore, the following hypothesis is established:

H3b: The relationship between anxiety and airline purchase intention is mediated by passenger’s mindfulness-based satisfaction
3.2.4 Satisfaction and Willingness to Pay (WTP)

Generally, as consumers’ willingness to pay for a product or service is closely related to a firm’s financial performance, it eventually contributes to a firm’s success. The topic is hence of great relevance in the economic literature. Willingness to pay is defined as the maximum amount an individual accepts or is willing to pay for a given product or service (Kalish and Nelson, 1991). Prior academic research has examined factors influencing a consumer’s willingness to pay for product or service, thereby most often emphasizing the willingness to pay a prime premium (e.g. Aaker, 1996; Anselmsson, Bondesson, & Johansson, 2014), which is primarily influenced by prior brand experience and brand image, which in turn is, among others, influenced by perceived uniqueness, credibility and quality (Brakus, Schmitt, & Zarantonello, 2009). In the airline context, it was found that especially the corporate reputation of an airline, which is displayed by airline size, age, as well as crash history, positively effects consumers’ willingness to pay for it (Graham & Bansal, 2007). However, this study does not aim to investigate consumers’ willingness to pay for the airline itself, but rather their willingness to pay a fee for an optional in-flight service offered by the airline.

The sale of fee-based ancillary and secondary services and passenger’s acceptance towards them is a relatively new research area (Ødegaard and Wilson, 2016) and results are still controversial. Generally, though, consumers’ willingness to pay can be explained by equity theory by Adams (1965), which focuses on fairness in social exchange can be seen as the foundation for explaining consumers’ willingness to pay for fee-based services. It suggests that an individual perceives equitable treatment or exchange fairness if the ratio of his/her input (e.g. money) and outcome (e.g. satisfaction) in an exchange is in some sense fair. For instance, when a customer experiences an increased state of satisfaction, they perceive a high outcome of an exchange and therefore are likely to be willing to pay a fee compared to less satisfied customers. Adams (1965) This can be also assumed for products or services that are perceived to have a high/low outcome in satisfaction. Similarly, Cronin and Taylor (1992) claim that consumers’ willingness to pay for products or services is largely influenced by factors related to value perception and satisfaction.

So far, several studies have concluded that passengers are more reluctant than willing to spend money on ancillaries, since most of the services offered by the airline are unbundled ancillary services, which were previously complimentary, leading to customers perceiving fees as unfair
(Warnock-Smith et al., 2017). Besides, the study by Wanrock-Smith et al. (2017) finds that only necessity products or services, such as baggage, food and drink or seat assignment, are likely to be accepted by passengers, whereas commission-based ancillaries for instance, are perceived to be optional extras and thus, generally receive a lower willingness to pay.

In contrast, O’Connell and Warnock-Smith (2013) argue that different categories of ancillary services, evoke differences in customers’ expectations and purchase behavior regarding those services. They claim that frequent flyer programs and commission-based ancillaries for instance, generally are perceived as non-offensive by passengers but rather seen as „value-added extras which are sometimes worth paying for“ (p. 14). Hence, as long as the customer’s perception of value-for-money is given, customers are more willing to purchase such ancillaries and for the airline (O’Connell & Warnock-Smith, 2013). A passenger survey by Ascend in 2012 confirms this statement, as the results show that more than half of the participants would purchase destination-related offers onboard a flight, especially services, such as guided tours, entertainment or attraction tickets or ground transportation (Warnock-Smith et al., 2017).

Consequently, the authors argue, that as long as these services are not imposed on customers by pushy or aggressive advertising during the booking process, such as automatically opting passengers into additional travel products or forcing them to say no to those, these services are likely to be valued passengers.

Besides, several studies show, that fees for services implying more comfort during the flight, including seating choice, greater seat pitch (i.e. additional legroom) or premium seats are more likely to be accepted among customers (Lee & Lunego-Prado, 2004; Mumbower, Garrow, & Newman, 2015).

While willingness to pay for ancillary services are still debated in literature, it can be assumed that there are scenarios in which ancillary fees are justified and more likely to be accepted without leading to negative feelings among customers. That is, when either the ticket price is lowered and the charge for the unbundled products are offset (O’Connel & Warnock-Smith, 2013) or when products or services are offered that increase passenger comfort or perceived service quality and value (Balcombe et al.; 2009). Congruently to Cronin and Taylor (1992), Williams et al. (1999) state that product or ancillary fee responses/ purchase decisions likely depend on the awareness of potential fee benefits and thus, on one’s individual value for money perception.
Therefore, it is proposed that fees affecting a person's well-being positively or that are consistent with the passenger's own interests/needs are likely to be more accepted (Tuzovic Simpson, Kupelwieser & Finsterwalder, 2014). Therefore, for the purpose of this study, it is assumed that passenger WTP is increased for services are perceived with high (or increased) satisfaction. Thus, the following hypothesis is proposed:

H4a: Satisfaction has a positive influence on passengers’ willingness to pay for the Mindfulness Service.

Furthermore, as in H3b already mentioned, anxiety likely influences airline choice and consumer’s willingness to pay for safety attributes depending on the passenger’s perceived safety level (Molin et al.; 2017). In particular, the study finds that consumers’ willingness to pay for improvements regarding certain safety attributes decrease with higher initial perceived safety values. Looking at this vice versa, it can be assumed that little perceived safety, which is likely experienced in case of anxiety, can lead to higher willingness to pay for airline attributes that increases perceived safety or help individuals alleviating their fear. Based on this, it can be assumed that anxiety also influences passenger’s willingness to pay a fee for services that reduces anxiety. Thus, with both anxiety and satisfaction assumed to influence passenger’s willingness to pay, this study proposes that passenger’s mindfulness-based satisfaction functions as a mediator in the relationship between anxiety and passenger’s willingness to pay.

H4b: The relationship between anxiety and willingness to pay is mediated by passenger’s mindfulness-based satisfaction
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The following section will provide a brief overview of the airline industry and the basis of the research design. Furthermore, an overview of the questionnaire targeting the end consumer, as well as the collected data will be provided.

4.1. Research context

As mentioned before, meditation-based mindfulness has gained more relevance and interest among many domains, mainly however in the health industry. In fact, the concept of mindfulness and its potential is lacking research within a consumer context. Therefore, for this research, a consumer context was chosen as a research context, as a start of filling this research gap. Specifically, the service sector and the airline industry in particular have been chosen for several reasons. First of all, the service sector generally is continuously growing in its size and relevance, making it an interesting context for new potential services (Lee & Wolpin, 2006). Besides, there is no research to date investigating mindfulness as a consumer service, making the service context an interesting new research focus for this topic, in which insights from this research’s results and the resulting implications are expected to be even more valuable, and an essential template for future research.

Furthermore, flying became of enormous importance to modern society, which is reflected in the substantial growth of the airline industry (Rosen, 2018). This growth can be partly explained by the occurrence of extremely low air fares throughout the years due to the rise of low-cost carriers, making flight services more accessible to a vast range of people and turning them into a desired means of transportation. Besides, globalization and firms conducting business internationally, as well as due to rising migration rates, international air travel has gained in relevance and demand has been increasing (Rosen, 2018).

In fact, statistics show for instance that 89% of all German citizens have been on an airplane in the past and commercial airline industry has recorded more frequency in reported flights (Rosen, 2018) and more than double US dollars within the last 16 years (Statista, 2020b).

The airline industry, however, is highly vulnerable to external factors such as environmental concerns, economic downturns (Wang et al., 2016) or terrorism issues, leading to a decrease in
consumer demand (Clark et al., 2009). As already mentioned in the literature review, generally, feelings of discomfort and anxiety constitute an issue for a considerable amount of people (Seaney, 2013), leading to the assumption that airlines can use this as a potential opportunity to create services, such as the Mindfulness Service, with which they are able to not only replace negative affects with an increased satisfaction, but also to differentiate and contrast themselves from competitors and gain market share.

Hence, a mindfulness service in the airline industry in particular, is assumed to hold tremendous benefits for consumers due to its connection and relevance towards perceived anxiety and stress, which is one of the core benefits of (meditation-based) mindfulness. Hence, it would be reasonable to assume an even higher motivation of airline passengers to engage with mindfulness compared to consumers of other industries. Therefore, conducting the study in an industry where mindfulness effects might be of particular interest and relevance represents an interesting context for research and was highly desired by the researcher. Hence, the airline industry was identified to be the most reasonable research context and perhaps the only fit for the purpose of this study.

4.2. Theory of Science

How research is conducted, as well as how the results are interpreted is greatly influenced by one’s underlying beliefs and assumptions about human knowledge (ontological assumptions) and organizations realities about the world (epistemological assumptions), as well as the extent the own values influence a research process (axiological assumptions) (Saunders et al., 2009). These considerations are important when choosing an appropriate research design/ strategy which comes along with philosophical commitments (Johnson & Clark, 2006).

Paradigms can be defined as “(…) a set of basic and taken-for-granted assumptions which underwrite the frame of reference, mode of theorising and ways of working in which a group operates.” (Saunders et al., 2009, p. 140). In other words, paradigms provide insights in “[…] the political or ideological orientation of researchers towards the social world they investigate” (Saunders et al., 2009, p. 132), thereby helping with the potential paths one can or should follow when developing acceptable knowledge.
Within the four ideological dimensions (subjectivist, objectivist, radical change and regulatory perspective), Burrell and Morgan (2016) established four distinct and rival paradigms of organizational analysis, namely functionalist, interpretative, radical structuralist and radical humanist, which represent four different ways of viewing the social and organizational world.

The most suitable paradigm describing this work is the functionalist paradigm, which is located in the objectivist and regulation dimension, and is based on the assumption that rational problems require rational explanations. As it contains objective traits, researchers “(…) seek to discover the truth about the social world, through the medium of observable, measurable facts, from which law-like generalizations can be drawn about the universal social reality” (Saunders et al., 2009, p 136). Thus, researchers believe in only one true social reality, hence, this reality is no influences by the interpretations and experiences of social actors (and the researcher). Simply said, the functionalist paradigm deals with rational explanations free from one’s own interpretations, which makes findings in terms of developed knowledge often generalizable, as well as applicable to other contexts (Burrell & Morgan, 2016). In addition, the regulatory aspect refers to research that “(…) seeks to suggest how organisational affairs may be improved within the framework of how things are done at present, rather than radically challenging the current position” (Saunders et al., 2009, p. 139).

This aspect aligns with this research, as it aims to identify recommendations and implications towards the solvation of a problem or rather critical circumstances. Research within this paradigm is most often underpinned by the positivist research philosophy, which emphasizes “(…) on strictly scientific empiricist method designed to yield pure data and facts uninfluenced by human interpretation or bias” (Saunders et al., 2009, p. 136). This research aligns with this standpoint, as the empirical observations and findings of this research are based on objective statistical data analysis. Further, data was collected via an online questionnaire with predetermined answers by the researcher, making subjective values and interpretations impossible to influence answers by the respondents.

4.3. Research Design and Time Horizon

In order to test the specific hypothesis and study the relationship between a MSP and passenger satisfaction, including its moderators and outcome variables, it is generally important to follow a coherent research design (Malhotra, Nunan, & Birks, 2017). In this study a causal research
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approach has been utilized in order to uncover causal relationships. Therefore, a framework of dependent and independent variables has been established and tested empirically (Malhotra et al., 2017).

Further, in line with the functionalist paradigm, the study dominantly employs a deductive research design. Whereas the inductive method is generally based on the assumption that scientific knowledge can be created through the empirical observation of a given phenomenon, without prior literary proposals or evidence and thus, leading to a proposal of theoretical foundations (Chalmers, 1999), a deductive research design is based on the approach of scientists building on prior knowledge or existing literatures, theories or laws to predict the performance of the variables of interest and therefore, propose a future given phenomenon (Dresch, Lacerda, & Antunes, 2015). The deductive approach can be identified for this research, as theory and hypotheses are developed on the basis of previous information and researches, and the research strategy was designed to test the hypotheses (Saunders et al., 2009). Generally, the starting point of an abductive research design is usually an observation of a ‘surprising fact’, about which then a plausible theory concerning the background of how this could have occurred is worked out. Thereby, it is usually based on the approach of scientists building on prior knowledge or existing literature regarding the topic in a different context, as there is usually far less information regarding the topic in the context of interest by the researcher. Therefore, the researcher is able to modify an existing theory and eventually, make a theoretical as well as an empirical contribution. (Saunders et al., 2009).

In this research, abductive design elements are slightly present, as there is no prior research about the concept of mindfulness as a service offering, and hence, nor information about mindfulness as a service specifically in the airline industry. It was simply found out that services like this exist, which constitutes the ‘surprising fact’ on which then the background theory was studied, and new hypotheses were developed.

Furthermore, this research study is based on a quantitative research method, which uses secondary data in order to develop profound hypotheses and test those empirically. Secondary data in form of previous findings has been laid out in the literature review of this academic work, while primary data has been collected via a consumer survey which will be elaborated on in the following chapter.
Data can be collected applying either a cross-sectional or a longitudinal approach. Whereas the former (cross-sectional) refers to data collection only happening once from a specified sample, thereby aiming to provide a snapshot of variables at a single point in time, the latter (longitudinal) approach involves gathering information repeatedly over a longer period of time, thus, is more concerned with uncovering changes in the data over a period of time (Malhotra et al., 2017). Cross-sectional data collection can be further divided into single cross-sectional designs, which is based on only one sample from a target population, as well as multiple cross-sectional designs, which draws data once out of two or more samples of participants. This research employs a single cross-sectional approach, since data is collected only once from a specific sample of participants in order to find out whether a MSP leads to an increase in consumer’s level of satisfaction during a flight.

4.4. Data Collection

In the following subsections the methods applied for both the primary, as well as secondary data collection will be described. Subsequently, the data reliability and validity will be elaborated on respectively.

4.4.1. Primary Data Collection

4.4.1.1. Quantitative Data Collection

For this work, an online survey was chosen as the most appropriate approach for data collection. Using an online survey as a tool for data collection enables the gathering of numerous portrayals of behavioral consumer traits, opinions or attitudes, which form the basis of future generalizations to the target population (Fowler, 2009).

Online surveys generally hold substantial advantages, including simplicity in terms of data consistency (since obtained responses are tied to a given set of alternatives) (Dresch et al., 2015), as well as in terms of target options, convenience, time frame and costs (Sue & Ritter, 2012). In fact, Sue and Ritter (2012) argue that online surveys hold the potential to gather large responses within a short time frame, which constitutes a prerequisite for being able to conclude statistical findings from the sample to the whole population (Malhotra et al., 2017). Besides it enables to easily target geographically dispersed individuals in the most economical way, as any kinds of set-up expenses can be avoided (Sue & Ritter, 2012). Furthermore, as online
surveys do not necessarily require the researcher to be present when filling out the questionnaire, participants are able to answer the survey at their own pace and are more likely to give more truthful answers. Thereby, potential bias due to social desirability can be reduced (Creswell, 2014).

The survey was created in the online survey platform Qualtrics, which was chosen due to its easy handling of the survey creation process, as well as the accessibility to data reports in form of descriptive reports. Besides, the usage of the software program was not tied to any expenses.

Survey Design

The questionnaire is comprised of 29 questions. Participants were confronted with fixed-response alternative questions, which generally decreases the variability of results and facilitates further analysis and interpretation of the data (Malhotra et al., 2017).

For testing and quantifying the different constructs necessary for answering hypothesis and research question, existing multi-item scales, adopted from prior literature were employed (Appendix B). Thereby, some of the measurement scales were modified and adapted to optimally suit and align with the research context. Participants were predominantly asked to indicate their level of agreement or disagreement of a certain statement on a 7-point Likert scale, ranging from 1 (‘Fully disagree) to 7 (‘Fully Agree), though including the option of neutral standpoint.

Arranged in a predefined order and divided in thematic clusters, the first questions covered consumers’ flying behavior and perceived anxiety levels, as well as their knowledge about the concept of mindfulness, followed by scenario questions regarding their perceived satisfaction with the in-flight entertainment program on board for both without a Mindfulness Service and with an additional Mindfulness Service. Further, questions asking about passengers’ future behavioral tendencies in terms of willingness to pay for the service, as well as airline choice or purchase intention were posed. The survey ends with classification questions relating to their demographics, including the participants’ gender, age, citizenship, education level and profession. Due to the sensitivity of such information, these questions were placed at the end of the survey in order to prevent any feelings of discomfort on the respondents’ side (Malhotra et al., 2017).
The questions also included an instructional manipulation check (IMC) in the middle of the questionnaire, asking participants to rate a statement with a specific answer. This way poor data quality due to participants’ lack of motivation and hence, reduced efforts shown through straight-lining, acquiescence or choosing the first reasonable response, can be avoided (Krosnick, 1999) as these participants can be excluded from further analysis.

Furthermore, the questionnaire was made available in the German and English language and kept short in length (approximately 7 minutes) to minimize the required effort for participants and reduce the likelihood of participants not completing it. Finally, the data were collected within a 6-week period, starting on June 25th, 2020 and ending on August 6th, 2020.

**Survey Sample**

Data collection took place using the non-random sampling techniques of convenience-, as well as snowball sampling method. The survey was distributed primarily through highly populated internet platforms, such as Facebook and LinkedIn, including appropriate social network groups, e.g. regarding the topic flying anxiety or phobia. Besides, the survey was distributed through the researcher’s personal network, including family, friends and acquaintances, mainly German-speaking or -residential respondents of any gender, age, or flying habit. To reduce sampling bias and achieve a sufficiently large sample size, suitable respondents were also animated to forward the survey to their respective social networks (Robinson, 2014). By following this approach, an initial sample size of 171 respondents could be generated. However, after screening the sample properly and eliminating incomplete and/or invalid data, a total of 148 complete and valid responses could be recorded, which represents an appropriate sample size (Stevens, 2012).

Moreover, in order to ensure the sample’s representativeness of the target population for this study, which was broadly defined as *male and female individuals living in Germany*, the sample’s age distribution aimed to reflect the age distribution of German airplane passengers. (Appendix A).
4.4.1.2. Reliability and Validity

According to Golafshani (2003) the replicability and repeatability of a study’s results or observations are a sign of reliable research. In line with Charles (1995), Golafshani, (2003) claims that therefore, the results need be consistent over time, which is referred to as stability. It is argued that “(…) a high degree of stability indicates a high degree of reliability, which means the results are repeatable” (Golafshani, 2003, p. 599). A definition by Joppe (2000) summarizes the notion of reliability by defining it as “(…) the extent to which results are consistent over time and an accurate representation of the total population under study is referred to as reliability and if the results of a study can be reproduced under a similar methodology, then the research instrument is considered to be reliable” (p. 1).

Congruently, within quantitative research, Kirk and Miller (1986) identify three types of reliability, namely (1) the degree to which a measurement, given repeatedly, remains the same (2) the stability of a measurement over time; and (3) the similarity of measurements within a given time period (pp. 41-42).

In order to be able to ensure reliability, this study generated a fairly large sample size (175). Although in total, 27 responses had to be eliminated due to invalid data and therefore could not be included in the data analysis, the final sample of 148 participants can still considered as reliable, as it exceeds the recommended size of at least 60 responses (Stevens, 2012). Besides, by the sample representing an appropriate age distribution by resembling the age distribution of the target population (Appendix A), reliability can be further ensured.

A small reduction in reliability of this study, however, occurs due to the choice of sampling technique. The study applied non-probability sampling methods of convenience- and snowball sampling, thereby only including people from the own network to most extent. Therefore, a sampling bias was created lowering the reliability of this study to a small extent, as valid generalizable conclusions about the whole population are prevented. However, by animating participants to further distribute the questionnaire to others (snowball effect), as well as by placing the survey in specific topic-related social network groups, participants outside of the researcher’s personal network could be reached and the sampling bias could be reduced a little. Although, a different technique, including probability sampling methods such as a stratified or systematic sampling technique, would have been more appropriate in terms of generalizability.
and reliability (Golafshani, 2003), due to the scope of this study, the applied sampling method is considered as reasonable.

Validity in quantitative research refers to the accurateness of the means of measurement (Golafshani, 2003) and therefore, also refer to ‘construct validity’- the initial concept, question or hypotheses, which determine the instrument for data collection (Wainer & Braun, 1988). In particular, it determines “(…) whether the research truly measures that which it was intended to measure or how truthful the research results are” (Joppe, 2000, p. 1).

In this research, validity of the results is ensured by applying well-established research instruments in form of a questionnaire, including proven scales measuring the different constructs and enabling the collection of valid data, as well as tools for conducting the statistical analysis. Nevertheless, the application of convenience sampling methods also impedes the research’s validity, as no inferences about the whole target population can be drawn with full certainty.

4.4.2. Secondary Data

Secondary data is an elemental component of the research design and can be defined as information that has been gathered prior for purposes not necessarily relating to the problem at hand (Malhotra et al., 2017). As great insights can be derived from secondary data, which can facilitate a problem stating and hence, can be used as a basis for further data collection, it should be gathered before collecting primary data. (Malhotra et al., 2017).

Therefore, for the purpose of this study, relevant external secondary data in form of previous research on mindfulness, satisfaction and airline services, including its influence and moderators, was gathered and reviewed. Thereby, in order to ensure its reliability, validity and transferability to this work’s research question, the researcher predominantly considered high quality and respectable data sources, including accredited journals and papers.
Analysis

The following chapter depicts the quantitative analysis conducted. Specifically, the statistical procedures, as well as the results for each hypothesis will be described.

5.1. Sample Profile

In total, 175 survey responses could be generated, out of which 148 were used for further analysis, after cleaning the data by excluding the answers of participants who did not finish the survey or did not match the pre-defined criteria (e.g. no resident in Germany or wrongly answered the IMC).

Specifically, the respondents comprise of 31% male and 69% female respondents, out of which the majority (29,73%) is between 25 and 34 years old. The smallest age group constitutes the people of the age of 65 years and over (3,38%). The age distribution of the respondents can be considered representative, as it is in line with the age distribution of the chosen target population (Appendix A). Furthermore, most of the respondents are employed (66,89%), followed by students (20,27%) or retirees (22,93%). Table 1 provides an overview of the most important demographics

![Table 1: Demographics of Survey Sample](image_url)
5.2. Results

As a first step, the obtained 175 responses have been screened and invalid data has been removed. In total, 12 partially completed responses were eliminated, as well as 11 responses of the participants who did not answer the IMC questions correctly, as well as 4 respondents who did not have the Germany citizenship or who were no residents in Germany. After doing so, variables were coded, and factor analysis was performed in order to be able to conduct quantitative analysis. For this, the statistics software SPSS 19 by IBM was used and paired t-test, as well as linear regression analysis was performed, partly with the help of PROCESS v3.5 by Andrew F. Hayes (processmacro.org, 2020).

In order to ensure data validity and correct implications, the assumptions underlying paired t-tests, as well as linear regressions were tested prior to performing the analysis. Specifically, regression assumptions regarding normality, homoscedasticity, linearity, as well as multicollinearity were tested.

Assumptions for performing a paired t-test include continuous (not discrete) data (assumption is met), as well as normally distributed differences between pairs. According to the Shapiro-Wilk test, the differences for both short- and long-haul satisfaction either without a Mindfulness Service and with a Mindfulness Service are not normally distributed due to a significant p-value smaller than 0.001 (Appendix C3). However, the normality plot (Appendix C3) does not show any abnormalities, thus, it can be assumed that data is fairly normal distributed.

Further, in order to test for normality in terms of regression assumptions, the distribution of the collected data was examined, with emphasis put on the residual variables, which refer to random errors produced in case the relationship between independent and dependent variables is not accurately predicted by the model. A prerequisite for correct significance testing is that the residual variables are normally distributed, which can be confirmed when the data is represented in a bell-curved shape. (Jarque & Bera, 1980) Therefore, the Shapiro Wilk test was performed, which is one of the most common tests for testing normality in small sample studies (Razali & Wah, 2011). The p-values showed that no variables confirm normality and therefore do not provide sufficient room for interpretation. Therefore, further steps included screening for skewness and kurtosis, outliers, as well as predicted probability (Appendix C4). Looking at the skewness and kurtosis values of the residuals, it can be seen that these are slightly skewed,
however, most values lie within the acceptable range of -1 and 1, or close by, thus, thereupon one can derive a fairly normal distribution (Appendix C4.4) (DeCarlo, 1997). Besides, according to the normality plots of the residuals, the variables do not show great abnormalities, thus, it is assumed that the normality assumption is met.

Furthermore, homoscedasticity, or the absence of heteroscedasticity can be confirmed, as PROCESS automatically ensures homoscedasticity using the Huber-White Estimator.

Lastly, linearity, as well as the absence of multicollinearity, defined as the correlation between two independent variables, was verified. For the latter, the values of tolerance and variance inflation factor (VIF) show no higher value of 10. In fact, the lowest tolerance is 0.773 and the highest VIF is 1.293, both for testing satisfaction with the Mindfulness Service on short-, as well as long-haul flights on anxiety.

The descriptive results, including the mean, standard deviation, skewness and kurtosis values of variables, as well as the residuals are displayed in Table 2.

<table>
<thead>
<tr>
<th>Statistic</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Skewness of Variables</th>
<th>Skewness of Residuals</th>
<th>Kurtosis</th>
<th>N</th>
<th>Answer Scale (4-neutral)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-haul SAT without MS</td>
<td>3.64</td>
<td>1.355</td>
<td>0.155</td>
<td>0.145</td>
<td>-0.247</td>
<td>148</td>
<td>C-low perceived satisfaction; 7= high perceived satisfaction</td>
</tr>
<tr>
<td>Short-haul SAT with MS</td>
<td>4.91</td>
<td>1.39</td>
<td>0.828</td>
<td>0.083</td>
<td>0.518</td>
<td>148</td>
<td>C-low perceived satisfaction; 7= high perceived satisfaction</td>
</tr>
<tr>
<td>Long-haul SAT without MS</td>
<td>3.83</td>
<td>1.511</td>
<td>0.813</td>
<td>-0.82</td>
<td>1.817</td>
<td>148</td>
<td>C-low perceived satisfaction; 7= high perceived satisfaction</td>
</tr>
<tr>
<td>Long-haul SAT with MS</td>
<td>3.92</td>
<td>1.079</td>
<td>1.259</td>
<td>1.109</td>
<td>1.999</td>
<td>148</td>
<td>C-low perceived satisfaction; 7= high perceived satisfaction</td>
</tr>
<tr>
<td>Anxiety</td>
<td>3.53</td>
<td>2.988</td>
<td>0.816</td>
<td>***</td>
<td>***</td>
<td>148</td>
<td>C-low anxiety; 7= severe anxiety</td>
</tr>
<tr>
<td>Short-haul API</td>
<td>3.66</td>
<td>1.396</td>
<td>-0.566</td>
<td>-0.612</td>
<td>-0.537</td>
<td>148</td>
<td>C-low likelihood of purchase; 7= high likelihood of purchase</td>
</tr>
<tr>
<td>Long-haul API</td>
<td>3.833</td>
<td>1.647</td>
<td>0.288</td>
<td>0.044</td>
<td>-1.029</td>
<td>148</td>
<td>C-low likelihood of purchase; 7= high likelihood of purchase</td>
</tr>
<tr>
<td>Short-haul WTP</td>
<td>3.61</td>
<td>3.63</td>
<td>1.149</td>
<td>1.133</td>
<td>1.054</td>
<td>148</td>
<td>C-no willingness to pay; 7= high willingness to pay</td>
</tr>
<tr>
<td>Long-haul WTP</td>
<td>6.22</td>
<td>5.273</td>
<td>0.871</td>
<td>0.779</td>
<td>0.23</td>
<td>148</td>
<td>C-no willingness to pay; 7= high willingness to pay</td>
</tr>
</tbody>
</table>

Notes: *** These are salary predictor variables, for which no residuals are calculated.

Table 2: Descriptive Results

5.2.1. Hypothesis Results

H1: Mindfulness Service on Satisfaction

According to the statistical analysis of the first hypothesis, which assumes a positive influence of a Mindfulness Service on the perception of passenger satisfaction, a positive relationship between the two variables can be observed due to the p-values of 0.000 for both short- and long-haul flights. Since this value is smaller than the accepted level of significance of 5%, the first hypothesis can be confirmed.
Results further reveal that there is a difference in the level of influence of a MS in passengers’ satisfaction depending on the duration of the flight. Although, a higher satisfaction level can be observed for long-haul flights, the difference between the satisfaction without a MS and the satisfaction with the MS is relatively smaller on long-haul flights compared to short-haul flights. This can be seen in the mean difference value of -1.270 for short-haul and -0.588 for long-haul flights.

**H2: Anxiety on Satisfaction**

As assumed, the results of the analysis for the second hypothesis show, that anxiety has an effect on passenger’s satisfaction level. In fact, it was hypothesized that the Mindfulness Service has a stronger impact on the mindfulness-based satisfaction ($SAT \text{ w/MS}$) for higher level anxiety passengers. Looking at the beta-values in Figure 2 on can observe that anxiety has a stronger influence on passenger’s satisfaction with the Mindfulness Service ($SAT \text{ w/MS}$) compared to the satisfaction without the MS ($SAT \text{ w/o MS}$) due to the differences in the beta values. In other words, the higher the level of anxiety, the higher the satisfaction with the Mindfulness Service, thus, anxiety can be considered as a moderator. Hence, hypothesis 2 can be confirmed as well.

Besides, the result reveal that anxiety has a stronger influence on the satisfaction with the Mindfulness Service on short-haul flights ($\beta= 0.183; p= 0.003$) compared to long-haul flights ($\beta= 0.169; p= 0.001$).

**H3a: Satisfaction on Airline Purchase Intention**

The third hypothesis assumes that a higher satisfaction has a positive effect on passengers’ purchase intention. The results show indeed a positive relationship between the two variables for both short-haul ($\beta = 0.239; p = 0.000$) and long-haul flights ($\beta = 0.428; p = 0.000$), thus the third hypothesis can be supported. Specifically, the result suggests, that the influence of satisfaction on airline purchase intention is stronger on long-haul flights compared to short haul flights due to the higher beta value.

**H3b: Satisfaction as a Mediator between Anxiety and Airline Purchase Intention**

Further, it was proposed that the relationship between satisfaction and airline purchase intention is mediated by passenger’s mindfulness-based satisfaction. To test this hypothesis, PROCESS
Analysis

v3.5 by Andrew F. Hayes was used. The output of the regression analysis reveals, that a partial mediating effect of satisfaction can be determined. For both, short- and long-haul flights, the direct effects of anxiety on airline purchase intention, the effects of anxiety on mindfulness-based satisfaction (mediator), of mindfulness-based satisfaction on airline purchase intention (see Figure 2), as well as the indirect (mediation) effect and its significance determined by the lower limit contingency interval (LLCI) and the upper limit contingency interval (ULCI) (Short-haul: IE=0,03; CI=(0,01; CI=0,06); long-haul: IE=0,04; CI=(0,02; 0,08), it is revealed that a significant partially mediating effect of satisfaction on the relationship between anxiety and airline purchase intention for both short- and long-haul flights can be derived. Additionally, it can be seen that higher anxiety level passengers are more likely to purchase an airline which offers a Mindfulness Service (DE=0,14; p=0,00).

![Diagram](image)

Figure 2: Mediation Model: Mindfulness-based satisfaction as a mediator between anxiety and API for short- and long-haul flights.

**H4a: Satisfaction on Willingness to Pay**

Looking at the influence of satisfaction on an individual’s willingness to pay for the service (H4), one can observe another positive relationship ($\beta = 0.920; p = 0.001$) for short-haul flights, as well as for long-haul flights ($\beta = 1.634; p = 0.002$). Respondents that expressed a higher level of satisfaction seem to be willing to pay a higher amount for the service, compared to
people expressing lower satisfaction. Besides, the beta values reveal as well, that individuals tend to pay more for the service during a long-haul flight.

**H4b: Satisfaction as a Mediator between Anxiety and Willingness to Pay**

In order to test as well whether passenger satisfaction functions as a mediator in the relationship between anxiety and airline purchase intention, again PORCESS v3.5 by Hayes was used. Looking at the direct effects of both short- and long-haul flights regarding anxiety on willingness to pay, the effects of anxiety on mindfulness-based satisfaction (mediator), mindfulness-based satisfaction on willingness to pay (see Figure 3), as well as on the indirect (mediation) effect and its significance values (Short-haul: IE=0,10; CI=(0,02; 0,22); long-haul: IE=0,13; CI=(-0,03; 0,31), it can be derived that a partially significant mediating effect of satisfaction between anxiety and willingness to pay for short-haul exist, but the mediating effect for long-haul flights is not significant, as 0 falls between the contingency interval.

![Diagram](image)

Figure 3: Mediation Model: Mindfulness-based satisfaction as a mediator between anxiety and WTP for short- and long-haul flights.

The results of the statistical tests hypothesis testing are summarized in Figure 4.
Research Model 1

![Diagram for Research Model 1](image)

**Agenda:**
- Short-haul
- Long-haul

Research Model 2

![Diagram for Research Model 2](image)

Note: ***p-value < 0.001; **p-value < 0.01; *p-value < 0.10

Figure 4: Research Framework with statistical results (except the mediation results)
### Analysis

#### Regression Results – Direct Effects

<table>
<thead>
<tr>
<th>From</th>
<th>To</th>
<th>Sign.</th>
<th>Unstandardized Regression Coefficient</th>
<th>Standardized Regression Coefficient</th>
<th>S.E.</th>
<th>R²</th>
<th>P</th>
<th>Hypothesis</th>
<th>Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety</td>
<td>HSATNM</td>
<td>0.474</td>
<td>0.045</td>
<td>0.067</td>
<td>0.063</td>
<td>0.028</td>
<td>0.474</td>
<td>H2</td>
<td>No</td>
</tr>
<tr>
<td>Anxiety</td>
<td>SHSATMS</td>
<td>0.003</td>
<td>0.183</td>
<td>0.261</td>
<td>0.06</td>
<td>0.177</td>
<td>0.003</td>
<td>H2</td>
<td>Yes</td>
</tr>
<tr>
<td>Anxiety</td>
<td>LHSATNM</td>
<td>0.846</td>
<td>-0.011</td>
<td>-0.018</td>
<td>0.055</td>
<td>0.011</td>
<td>0.846</td>
<td>H2</td>
<td>No</td>
</tr>
<tr>
<td>Anxiety</td>
<td>LHSATMS</td>
<td>0.001</td>
<td>0.169</td>
<td>0.0309</td>
<td>0.048</td>
<td>0.134</td>
<td>0.001</td>
<td>H2</td>
<td>Yes</td>
</tr>
<tr>
<td>SHSATMS</td>
<td>SHAPI</td>
<td>0.000</td>
<td>0.239</td>
<td>0.393</td>
<td>0.064</td>
<td>0.196</td>
<td>0.000</td>
<td>H3a</td>
<td>Yes</td>
</tr>
<tr>
<td>LHSATMS</td>
<td>LHAPI</td>
<td>0.000</td>
<td>0.428</td>
<td>0.491</td>
<td>0.082</td>
<td>0.275</td>
<td>0.000</td>
<td>H3a</td>
<td>Yes</td>
</tr>
<tr>
<td>SHSATMS</td>
<td>SHWTP</td>
<td>0.001</td>
<td>0.92</td>
<td>0.366</td>
<td>0.269</td>
<td>0.167</td>
<td>0.001</td>
<td>H4a</td>
<td>Yes</td>
</tr>
<tr>
<td>LHSATMS</td>
<td>LHWTP</td>
<td>0.002</td>
<td>1.634</td>
<td>0.332</td>
<td>0.507</td>
<td>0.139</td>
<td>0.002</td>
<td>H4a</td>
<td>Yes</td>
</tr>
</tbody>
</table>

Table 3: Regression Results – Direct Effects

#### Regression Results – Mediation via PROCESS

<table>
<thead>
<tr>
<th>Relationship (X→M)</th>
<th>Mediator (M)</th>
<th>R²</th>
<th>F</th>
<th>P</th>
<th>X→M</th>
<th>P</th>
<th>X &amp; M→Y</th>
<th>F</th>
<th>P</th>
<th>Hypothesis</th>
<th>Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>Anxiety &amp; SHAPI</td>
<td>HSATNM</td>
<td>0.25</td>
<td>13.81</td>
<td>0.00</td>
<td>0.18</td>
<td>7.17</td>
<td>0.00</td>
<td>0.29</td>
<td>11.34</td>
<td>0.00</td>
<td>H3b</td>
</tr>
<tr>
<td>Anxiety &amp; LHAPI</td>
<td>LHSATMS</td>
<td>0.17</td>
<td>14.29</td>
<td>0.00</td>
<td>0.13</td>
<td>8.67</td>
<td>0.00</td>
<td>0.32</td>
<td>8.53</td>
<td>0.00</td>
<td>H4b</td>
</tr>
<tr>
<td>Anxiety &amp; SHWTP</td>
<td>LHSATMS</td>
<td>0.28</td>
<td>9.11</td>
<td>0.00</td>
<td>0.18</td>
<td>7.17</td>
<td>0.00</td>
<td>0.32</td>
<td>8.53</td>
<td>0.00</td>
<td>H4b</td>
</tr>
<tr>
<td>Anxiety &amp; LHWTP</td>
<td>LHSATMS</td>
<td>0.25</td>
<td>11.46</td>
<td>0.00</td>
<td>0.13</td>
<td>6.67</td>
<td>0.00</td>
<td>0.27</td>
<td>11.30</td>
<td>0.00</td>
<td>H4b</td>
</tr>
</tbody>
</table>

Table 4: Regression Results – Mediation via PROCESS

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1. SHSATNM = Satisfaction without the Mindfulness Service on Short-haul flights; SHSATMS = Satisfaction with the Mindfulness Service on Long-haul flights; LHSATNM = Satisfaction without the Mindfulness Service on Short-haul flights; LHSATMS = Satisfaction with the Mindfulness Service on Long-haul flights
2. SHAPI = Airline Purchase Intention on Short-haul flights; LHAPI = Airline Purchase Intention on Long-haul flights
3. SHWTP = Willingness to pay on Short-haul flights; LHWTP = Willingness to pay on Long-haul flights
Discussion

The following chapter focuses on the theoretical and practical implications which can be derived from the results described above. Besides, limitations of this study, as well as suggestions for future research will be discussed.

6.1. Theoretical Implications

In this following subsection, the theoretical implications for each hypothesis will be outlined respectively.

6.1.1. Implications of H1 – The effect of an added Mindfulness Service on Satisfaction

The primary goal of this academic work was to analyze the potential and significance of a meditation-based mindfulness service offer with regard to airlines’ passenger satisfaction due to a reduction of anxiety and stress. In addition, this study’s goal was to extend the previous literature by investigating the potential role of mindfulness-meditation as a service for passengers during ai travel.

As outlined in the literature review and hypotheses development, the concept of mindfulness-meditation, as well as consumer satisfaction are greatly researched by scholars within various domains. Nevertheless, no research has been found that proves or even investigates the effect of mindfulness meditation on consumer perceptions and behaviour regarding product or service offerings. Besides, only little research has been conducted indicating a positive effect of mindfulness on consumer/ tourists behaviour. Thereby though, these studies focused on either trait mindfulness or mindfulness services excluding the meditational part of mindfulness and thus, relating to services that simply provoke a mindful state in people’s mind. However, several studies within mostly clinical domains have proven the influence of mindfulness on well-being and (life) satisfaction due to the significant effect towards stress and anxiety reduction, which in turn lead to further psychological and health improvements (e.g. Kabat-Zinn, 1982; Kabat-Zinn et al., 1992; Kersemaekers et al., 2018). In the business context, meditation-based mindfulness’s effect on employee satisfaction has become of increasing interest (e.g. Dane, 2011; Glomb et al., 2011; Hülsheger et al., 2013). Besides, within the tourism context, it has
been shown that mindfulness, amongst others, can influence the travel anticipation phase, as well as evoke the tendency of consumer loyalty regarding destination choice (Taylor & Norman, 2019). In fact, as mentioned earlier, the study by Taylor and Norman (2019) is one of the few studies suggesting a positive effect of mindfulness on tourists’ satisfaction. However, the research solely considers mindfulness as a state evoked by destination related information services.

This academic work stresses the influence of a meditation-based mindfulness and its potential influence on perceived satisfaction when offered as a service to airline passengers. The study finds a significant positive relationship between the Mindfulness Service and satisfaction. Thus, it can be deducted that a Mindfulness Service has indeed a positive effect on passengers’ satisfaction level and the first hypothesis can be confirmed. Another result of this study indicates a difference in the mindfulness-based satisfaction of a passenger depending on the flight length. In fact, a higher mindfulness-based satisfaction can be observed for short-haul flights.

These findings constitute a first basis for further research on the topic of mediation-based mindfulness as a service offering in a business and consumer behavior context as opposed to an internal company context. Therefore, it also contributes to the emerging literature on mindfulness in a consumer context. In addition, this study contributes as an extension to prior research on mindfulness within various everyday situations (e.g. eating, walking, working, traveling), giving room for more generalizability of its effect on satisfaction within these contexts. Furthermore, by providing empirical evidence for the positive relationship between a Mindfulness Service and satisfaction level, this research adds up to the existing airline- and service literature introducing a new force and potential service offer that is likely to increase consumer satisfaction.

Possible explanations for the positive relationship found between the Mindfulness Service and satisfaction can be based on the various literature as outlined in the literature review, as well as the hypothesis development, stressing the beneficial effects of mindfulness meditation on positive affect and stress reduction (e.g. Kabat-Zinn, 1982; Hafenbrack, 2017). Besides, service that enhance well-being and comfort on board are more valued and desired (e.g. New York Times, 2018; Almadari, 1999) making a Mindfulness Service especially interesting for
passengers. Although, literature suggests that passengers place higher value on hedonic value- and comfort enhancing service offerings on long-haul flights (Pine and Gilmore, 1999; Richards et al., 1978; Ahmadpour et al., 2016), a possible explanation for the surprising finding of a higher mindfulness-based satisfaction on short-haul flights can be assumed to be grounded on the existing services on short- vs. long-haul flights. Since generally on long-haul flights more IFE services are offered to passengers, an additional Mindfulness Service might not be as valuable, compared to short-haul flights which offer very limited IFE content. This may be the case especially for lower anxiety level passengers. As the study’s participants cover up to 64% lower anxiety level individuals, resulting in an average anxiety level of 2.52 (see Appendix C2) it is a reasonable assumption.

6.1.2. Implications of H2 – The influence of Anxiety on Satisfaction

Drawing on great academic evidence showing the importance of emotions towards consumer’s satisfaction generation and decision-making, this work aims to investigate the influence of anxiety as a potential moderator in the effect of a Mindfulness Service on passenger satisfaction. With mindfulness being proved as a crucial force of various beneficial life outcomes, the mindfulness literature majorly deals with its influence as a moderating variable on relationships between variables, for instance, such as depressive affect and negative-cognition (Gilbert & Christopher, 2010) or expression of motivational self-concepts and daily behaviors motivation (Levesque & Brown, 2007). Little research has been conducted investigating factors moderating the effect of mindfulness on a depended variable. The study by Shapiro et al. (2010) is one of the few studies dealing with moderating influences regarding the effect of mindfulness on dependent variables. The study found that the effect of mindfulness, in particular, of a mindfulness-based stress reduction intervention, on subjective well-being and empathy is moderated by trait mindfulness.

With the construct of satisfaction being of enormous interest by many scholars, research considering moderating effects towards satisfaction, however, have been conducted to great extent. Generally, moderating effects influencing satisfaction have been found to be for instance, work hours, involvement and sources of support in the context of work satisfaction (e.g. Valcour, 2007) or personal demographics (e.g. gender and age) (Dubé and Morgan, 1998) or personal (situational) characteristics, such as self-esteem, health status, emotional intelligence or dissonance (e.g. Dubé and Morgan, 1998).
Although, the influence of positive emotions on consumer’s satisfaction level have been studied to a great extent by several researchers, few studies have been examining emotions as moderating effects influencing the level of satisfaction (Oliver, 1993; Westbrook and Oliver, 1993). Besides, the effect of anxiety on satisfaction in general has received little attention within literature (e.g. Fleischer et al., 2012; Batouei et al., 2019). Thereby, mostly a negative effect of anxiety on satisfaction has been found (Johnson et al., 2008; Bogicevic et al. 2016; Batouei et al., 2019). Therefore, this study assumed a Mindfulness Service to have an effect on passengers’ satisfaction level in the context of flight anxiety. Specifically, the current study hypothesized that higher level anxiety passengers are more satisfied when being offered a Mindfulness Service on board compared to passengers expressing a lower level of anxiety during flights.

The results indicate indeed a moderating effect of anxiety on the relationship between Mindfulness Service and satisfaction. In particular, it can be observed that a higher anxiety level leads to more satisfaction with the service, compared to the satisfaction without the service. This finding can be explained by Menon and Dubé’s (2004) and Batouei et al.’s (2019) work, who emphasize the importance of situational sources of flight anxiety, such as the role of service quality and responsiveness of service providers and its effect on flight anxiety and satisfaction. In particular, Batouei et al. (2019) find that airlines service quality has a negative effect on passenger’s anxiety, whereas it has a positive effect on passenger’s satisfaction. Similarly, Menon and Dubé (2004) argue that higher level anxiety customers greatly value and evaluate support providing responses even more positively by the service providers compared to lower level anxiety passengers, which results in an increased satisfaction.

Besides, it was shown that on short-haul flights, anxiety has a slightly bigger influence on mindfulness-based satisfaction than on long-haul flights, meaning higher level anxiety passengers’ satisfaction is slightly more influenced by a Mindfulness Service on short-haul flights. This could be explained by passengers simply having more options to be distracted during long-haul flights due to the variety of IFE service usually offered on long-haul flights, making a Mindfulness Service more valuable along the scarce service offerings on short-haul flights. Besides, Full Service Carriers (FSC) are usually perceived as safer than Low Cost Carriers (LCC) (Fleischer et al., 2015; Molin et al., 2017), which could also lead to passengers experiencing a stronger or a different kind of anxiety during short-haul flights, possibly due to
LCC usage, airplane types (e.g. smaller airplanes) or less service, hence, making a Mindfulness Service even more valuable.

These findings extend existing service marketing-, as well as flight anxiety literature focusing on potential strategies to handle anxieties on board by providing a more profound understanding of the effects of airlines’ service quality on passengers’ psychological states during a flight, which constitutes an important aspect of one’s flight experience (Batouei et al., 2019). Further, the study extends literature in as much as it introduces a variable influencing the effect of mindfulness on satisfaction. This study also contributes to the emerging mindfulness literature by introducing a different relationship between mindfulness and anxieties, whereby anxiety does not function as a dependent variable but as a moderating one.

6.1.3. Implications of H3a & H3b – The influence of Satisfaction on Airline Purchase Intention and Satisfaction as a Mediator in the relationship between Anxiety and Purchase Intention

Another objective of this study was to investigate potential outcomes of a higher level of satisfaction due to the additional Mindfulness Service on board. Specifically, the aim was to find out whether a higher mindfulness-based satisfaction could lead to a higher purchase intention of passengers on airlines offering such a service. Generally, consumers’ purchase intention is an important requirement for superior financial performance and customer retention and loyalty, thus, examining a possible relationship between those constructs can be of great strategic importance for firms and therefore worth investigating in this context.

Prior research has been emphasizing potential predictors of purchase intention, finding that next to price sensitivity, perceived product quality and value, as well as risk perception function as antecedents of satisfaction and purchase intention to great extent (e.g. Beneke et al., 2013; Jahangir et al., 2009; Maxwell, 2002). Similarly, in the airline industry, among others, satisfaction and service quality have been found to impact passenger’s airline (re)purchase intention (e.g. Baker & Crompton, 2000; Loureiro et al., 2020). Besides, value perception has been found to be a key antecedent of satisfaction, tourist decision making and thus, purchase intention (Loureiro et al., 2020). In fact, the higher the perceived value of a product or service, the higher the satisfaction and thus, the higher is the probability of a purchase (Zeithaml, 1988).
Based on this, it was hypothesized that a passenger’s increased mindfulness-based satisfaction positively influences a consumer’s purchase intention on airlines offering a Mindfulness Service. Although, the ultimate result reveals that it is rather unlikely that passengers choose an airline over another solely due to a Mindfulness Service, a significant effect can be observed, thus, the hypothesis 3a can be supported. These findings align with previous research, proving satisfaction as an antecedent and predictor of purchase intention (e.g. Zeithaml, 1988; Cronin & Taylor, 1992; Baker & Crompton, 2000).

Besides, the analysis reveals, that mindfulness-based satisfaction partially functions as a mediator in the relationship between anxiety and airline purchase intention. Thereby, anxiety shows a direct effect on airline purchase intention. Thus, satisfaction accounts partially for the total effect of anxiety on airline purchase intention and hypothesis 3b can be confirmed as well. Additionally, it was found that higher level anxiety passengers are more likely to choose an airline offering a Mindfulness Service. These findings align with prior research, suggesting that anxiety influences passenger decision-making, as well as willingness to buy (Fleischer et al., 2012; Molin et al., 2017).

Furthermore, although individuals seem to be slightly more satisfied with the Mindfulness Service on short-haul flights (H1), it was found that the mindfulness-based satisfaction has a stronger influence on the airline purchase intention for long-haul flights. In addition, it was also found that anxiety has a stronger direct effect on purchase intention for long-haul flights. The findings align with prior literature arguing that long-haul travelers tend to be more concerned about product features, quality (Lo & Lam, 2004) and comfort, which according to Vink & Hallbeck (2012) not only constitutes a key factor in one’s flight experience, but also positively relates to future repurchase intention, especially during long-haul flights.

With research having highlighted the beneficial outcomes of mindfulness referring to a large extent to health and psychological benefits, such as stress and anxiety reduction, better sleeping (e.g. Kersemaekers et al., 2018), other benefits have been found, among others, in the work life (Glomb et al., 2011; Hülsheger et al., 2013; Kersemaekers et al., 2018). Since only few studies have been researching the effect of mindfulness in a consumer context, the research on purchase intention specifically has not been researched before. However, research has been looking into the effect of mindfulness on decision making. For instance, Rosenberg (2004) is one of the rare works on mindfulness in consumerism and examines how it can lead consumers towards choice.
consumption rather than impulsive consumption habits. Specifically, the author elaborates how the cultivation of mindfulness can be utilized for reducing the destructive effects of consumerism, for instance, by alerting consumers to be aware of the manipulating effects of advertising persuading individuals to buy particular products. The study by Taylor and Norman (2019) has looked, among others, into the effect of mindfulness and its impact on decision making with focus on the travel anticipation phase prior to the trip, which is characterized as information gathering and choosing of a destination, as well as the accompanying options regarding accommodations, dining, and attractions in that destination. Thereby they refer to mindfulness as an act of “(….) analytically process(ing) information that results in the creation of new categories, openness to new information, and awareness of more than one perspective active deciding that is associated with a deep level of analysis for information processing” (p. 76). They conclude that more mindful individuals are more satisfied with the destination and the travel experience and therefore are more likely to be loyal to the destination.

Consequently, by demonstrating the effect of mindfulness-based satisfaction, as well as anxiety on passengers’ airline purchase intention towards airlines that offer a Mindfulness Service, this research shows that especially in the context of the airline industry, meditation-based mindfulness can constitute a relevant factor influencing consumer decision making and thus, purchase intention. Therefore, this work extends existing tourism- and consumer behavior literature by introducing a further influencing force in terms of value creation and satisfaction and thus, an individual’s purchase intention. Besides, it contributes to the literature showing that anxiety does not only influences passenger purchase intention in terms of flight attributes such as route or airline brand (Molin et al., 2017), but also certain anxiety reducing ancillary services.

The above mentioned explanation for the positive effect of a Mindfulness Service on satisfaction can also function as a plausible explanation for the fact that a Mindfulness Service or generally services promoting well-being and comfort during a flight are greatly valued and desired by passengers (e.g. Alamadari, 1999; Vink & Hallbeck, 2012) and if an airline offers such a service, passengers’ purchase intention is increased. Besides, the stronger influence of mindfulness-based satisfaction and anxiety on airline purchase intention for long-haul flights can be reasoned by previous findings on the characteristics of long-haul travelers. Specifically, while short-haul travelers purchase decisions are more influenced by factors, such as price or
schedule (Lo & Lam, 2004), long-haul travelers are less price sensitive (Crouch, 1994) and place higher value on comfort services (Vink & Hallbeck, 2012).

6.1.4. Implications of H4a & H4b - The influence of Satisfaction on Willingness to Pay and Satisfaction as a Mediator in the relationship between Anxiety and Willingness to Pay

A further interesting and important aspect to know is whether passengers are actually willing to pay for the Mindfulness Service. Airlines, as much as other businesses, generally develop product and services to achieve three major goals, namely customer satisfaction, outperforming competitors and profits (Alamadari, 1999). As consumers’ willingness to pay is closely related to a firm’s financial performance, the role and impact of services in relation to the overall airline product and the necessary investments behind it must be outweighed by understanding passengers’ expectation and how they see and value (ancillary) services (Alamadari, 1999). Consequently, this study sought to determine whether passengers’ satisfaction with the service has a positive effect on their willingness to pay for the service.

The results of this research indicate indeed a positive relationship between the two variables; thus, satisfaction seems to positively influence passengers’ willingness to pay and the fourth hypothesis can be as well confirmed. This is an interesting finding, as the results of scholars investigating passengers’ acceptance of fee-based services in the airline industry are still controversial (see Chapter 3.2.4). However, this positive effect of satisfaction on passengers’ willingness to pay can be grounded on prior research, which outlined factors driving a consumer’s willingness to pay. For instance, the work by Croning and Taylor’s (1992) finds, that consumers’ willingness to pay is largely influenced by factors related to value perception and satisfaction. In particular, as outlined before in the hypotheses development, passengers are more likely to pay for fee-based products or services when these increase passenger comfort, align with passenger’s perceived service quality and values (Balcombe et al., 2009), and thus, align with one’s individual perception of value for money (Williams et al., 1999).

Besides, the analysis revealed that mindfulness-based satisfaction partially mediates the relationship between anxiety and willingness to pay, indicating that anxiety as well has an effect on willingness to pay for the service. In particular, it is shown that the higher the level of anxiety, the more the passengers are willing to pay for the service. This aligns with the study previous findings that consumers’ willingness to pay is closely related to perceived safety, thus,
anxiety levels (Molin et al., 2017) and that willingness to pay for certain anxiety alleviating attributes is monotonically increasing with anxiety levels (Fleischer et al., 2012).

Further, the study revealed that mindfulness-based satisfaction has a stronger influence on individuals’ willingness to pay on long-haul flights than on short-haul flights. Since the mindfulness-based satisfaction is found to be higher for short-haul flights (H1), the result is surprising, but as well can be grounded on the fact that long-haul travelers are less price sensitive (Crouch, 1994) compared to short-haul travelers, who are found to be more reluctant than willing to spend money for in-flight services, especially when travelling with low-cost airlines (Warnock-Smith et al., 2017). Similarly, the effect of anxiety, as well as the mediating effect of mindfulness-based satisfaction was found to be stronger for long-haul flights compared to short-haul flights, although the mediating effect for long-haul flights was not significant.

Although several studies examined the influencing factors driving a passenger’s willingness to pay for airline services, due to the new concept of mindfulness meditation as a service introduced in this work, no information yet exists on the willingness or acceptance to pay a fee for a Mindfulness Service. Therefore, this work extends the existing literature by suggesting that an increased level of satisfaction through mindfulness meditation constitutes a valuable ancillary-revenue generating service, especially on long-haul flights. Further, these findings contribute to the literature of ancillary fee acceptance, proving that fees for comfort-or service quality increasing products or services are more likely to be accepted among passengers (Balcombe et al., 2009). Besides, a contribution can be made to the consumer behavior literature, specifically in the airline industry examining the effect of anxiety on the willingness to pay for further airline attributes other than flight route or airline brand (Molin et al., 2017). Lastly, this study finds that the average willingness to pay for the service for short-haul flight lies at 3,6 euros, while for long-haul flights, the average maximum price people are willing to pay lies at 6,2 euros. Consequently, this further proves the differences in passengers’ price sensitivity depending on the flight duration and that flight length really does create additional opportunities to sell value adding ancillary products and services for higher prices (Warnock-Smith et al., 2017).
6.2. Practical Implications

The results suggest some main practical implications, which could assist airline management in developing ancillary services and handling passenger anxiety. In addition, the findings could assist in developing marketing and training strategies and associated sales, potentially leading to an increased revenue per passenger.

With several research proving significant influences of mindfulness on numerous aspects of life, the concept of mindfulness started to become subject to many scholars in various domains. In line with prior research and with what the author of this study expected, the results of the study show that an additional Mindfulness Service to the IFE program on board significantly creates higher satisfaction among airline passengers. Therefore, the findings of this academic work as well emphasize the importance of the concept of mindfulness for management, as not only a promising new service serving passengers’ anxiety reduction, well-being and satisfaction on board is introduced, but also the importance of airlines’ service quality is emphasized due to its crucial positive effect on passenger’s satisfaction. This implication has also been stressed in previous works implying that improving the quality of services is necessary for increasing customers’ satisfaction and reducing their anxiety levels (Park et al., 2004; Batouei et al., 2019).

Besides, the study shows a positive effect of anxiety as a moderator towards the influence of a Mindfulness Service on passenger’s satisfaction. In fact, it has been shown that higher level anxiety passengers show a higher satisfaction with the service than lower level anxiety passengers. The implications of these findings can be meaningful in the context of airline companies’ emphasizing the importance of mindfulness in terms of in-flight anxiety reduction or prevention and satisfaction enhancement. Airlines should generally reduce passengers’ negative emotions (e.g. anxiety, stress, discomfort) in order to provide a more pleasant travel experience, but also to create more opportunities for further profit generation through customer attraction, re-purchase intention or loyalty. Especially, with this study, as well as previous studies (e.g. Molin et al., 2017) indicating that anxiety has an effect on airline purchase intention, airlines might be able to create some profit generating opportunities if they leverage anxiety reducing services. Therefore, airlines could for instance, invest in crew training and education on how to deal with anxiety passengers or, moreover, improve its different dimensions of service quality. Especially, with high service quality and the resulting
satisfaction having significant positive consequences for airlines and businesses in general, including higher likelihood of loyalty, less price sensitivity and less risk- perception. (e.g. Zeithaml, 1988; Cronin & Taylor, 1992), airlines should pay great attention to service quality improvements. In fact, while investigating an airports service environment and its effect on individual’s anxiety- and satisfaction level, Bogicevic, Yang, Cobanoglu, Bilghihan, & Bujisic (2016) show that the higher the perceived service quality in the airport, the less anxious travelers feel, indicating that the more consumers are satisfied with a product or service, the less anxious they might feel. Consequently, by proving a positive effect of the increased mindfulness-based satisfaction on passenger’s airline purchase intention, important practical implications can be derived particularly for the airline industry.

A further main implication for airlines can be seen in the great advantage of developing and implementing a Mindfulness Service for passengers. Therefore, airlines could partner up with digital meditation service firms, such as Headspace or Calm, whose content can be offered to passengers either by giving them access to these apps on their own devices or by including it in the airline’s internal board program. The mindfulness program could include mindfulness meditation in terms of both somatic and cognitive relaxation exercises geared towards the specific stresses and anxieties that often occur during the flight. These could include breathing- and focus/ awareness exercises or body relaxation through progressive muscle relaxation- or stretching exercises. Such exercises likely help passengers to relieve stress and bodily tension and distract themselves from self-threat and negative affect. Further, these apps also offer bedtime stories to facilitate sleeping as well as relaxing music or sounds (Calm, 2020) which could also be offered to facilitate sleeping in limited space.

Besides, before introducing a Mindfulness Service, airlines should further investigate possible factors influencing the satisfaction with Mindfulness Service, for instance, the average anxiety level their customers experience or how familiar their passengers are in general with mindfulness and meditation practices. Further, when introducing such service to the board program, airlines should promote the service along with a memorable customer experience and general service quality as a major source of competitive advantage (Chang & Yeh, 2002) and emphasize the added value of a Mindfulness Service. Besides, in terms of targeting measures, airlines could use a pointed segmentation approach to direct sales- and marketing efforts toward
customers who are most likely to be interested in a Mindfulness Service. Therefore, airlines might be able to increase revenue.

Further, when integrating a Mindfulness Service, practitioners in the airline industry should also consider when and how the service should be offered to passengers. For instance, other than offering the service as part of the IFE program, airlines should consider the option to offer the service even prior to actual departure, for instance, in form of a (digital) 4-week meditation tutorial service in order to get passengers familiar with mindfulness meditation and potentially maximize its effects during in-flight usage.

Lastly, with the results indicating that passengers are likely to pay a small fee for the service, airlines have the possibility to create a new revenue generating ancillary service. Hence, considerations of airline management should concern how to include the service along other ancillary services and whether and how much to charge for it. For instance, the service could be offered as a single service or within an ancillary package along with a seat upgrade or food services. According to the results of the study, the willingness to pay a higher fee for the service on long-haul routes tends to be approximately twice as much than for short-haul flights. With this in mind, especially on short-haul flights airlines could possibly offer the service as a package deal with other valuable ancillary products or services, rather than offering it as a single ancillary item in order to further increase (higher) willingness to pay among passengers.

6.3. Limitations

The following section elaborates the theoretical as well as methodological limitations the study exhibits.

6.3.1. Theoretical Limitations

A first limitation can be considered within the established research framework itself, as certain relevant constructs, either in form of antecedents, moderating, mediating or outcome variables were not included in the framework while investigating the relationship between a Mindfulness Service and airline passengers’ satisfaction in a more holistic picture. It is important to note, that other constructs, such as prior mindfulness knowledge or practice, consumer characteristics and behavioral traits, such as passenger’s new product/ service adoption levels, exist which could also play an important role in the relationship.
Moreover, the findings should be viewed with caution, since respondents answers could potentially be biased, either because participants want to provide answers assumed to be desirable for the outcome of the study (Chung & Monroe, 2003) or emotional responses such as anxiety may fade with time and may not be captured with a survey conducted not at the time the event is happening. Furthermore, for the construct of anxiety, as well as satisfaction aiming to measure a participant’s level of flight anxiety or satisfaction, no clear definition of scale points exists, which can cause a different understanding of each scale number by participants. Therefore, these questions might have been expressed differently by individuals, which might have affected the study results.

6.3.2. Practical Limitations

Further limiting aspects regarding methodological procedures in this research should be taken as well into consideration.

First, limitations regarding the sampling technique applied for this study occur due to the usage of convenience- and snowball sampling (non-probability sampling) via the internet as the main distribution platform in order to reach a sufficiently large sample size. Since mainly people from the researchers own network are questioned while individuals of the target population which do not get the same chance of being questioned are excluded, the current sample represents only a limited portrayal of the target population. Therefore, the reliability of the results can be affected (Golafshani, 2003). Consequently, different sampling techniques, such as probability sampling (e.g. systematic-, stratified-, or simple random sampling) would have led to more representative results, as well as the generalizability to the target population would have been further increased (Golafshani, 2003). Besides, the sample size of this study is rather small and only limited to German citizens, reducing the generalizability of the findings as well.

Furthermore, since the researcher’s network mainly consists of (female) students or people aged 60 years plus, the age and gender distribution of the sample shows small deviations from the target population (Appendix A).

Lastly, few limitations concerning the analysis process need to be considered, since it was discovered that not all variables are perfectly normal distributed (due to significant p-values for the Shapiro Wilk test and slightly skewed values). Specifically, the variables, satisfaction
Discussion

without the Mindfulness Service on long-haul, satisfaction with the Mindfulness Service on long-haul, willingness to pay during short-haul flights seem to slightly violate the normality assumption. Besides, not sufficient linearity exists for the variable satisfaction without Mindfulness Service for both short- and long-haul flights.

6.4. Recommendations for Future Research

This study proves a positive relationship between a mindfulness-meditation service and airline passenger’s satisfaction and thereby, contributes, among others, to the wide mindfulness literature emphasizing the positive effects of mindfulness meditation in a consumer context. However, this study’s results are limited to the airline industry. Since, prior research tested the mindfulness-based meditation effects already in a B2B-context, future research testing the concept of MaS could be conducted within another context and investigate, whether the findings can be applied to other industries as well. Especially, further research regarding mindfulness-meditation in the service industry and in a consumer context would be highly interesting.

Besides, as this study only focuses on German citizens to be representative in regard of a specific target population, the geographical scope is limited. Future research, however, could extend the target population to various countries and investigate the research model on a larger scale and thus, on different nationalities. Thereby potential behavioral and attitudinal differences among citizens can be discovered.

Furthermore, the methodological limitations of this study lead to the recommendation for future researchers to replicate this study, thereby following optimal methodological standards so that validity, as well as generalizability of the findings can be guaranteed. For instance, it is advised to test the hypothesis on a bigger sample, apply probability sampling techniques and make sure that all regression assumptions are met. In addition, future studies could additionally adopt a qualitative research approach and conduct interviews or focus group discussions, both before and after actual usage of a Mindfulness Service during a flight, thereby potentially uncover further interesting and more detailed insights of consumer’s thoughts about mindfulness in terms of satisfaction, anxiety reduction and behavioral intentions.
Moreover, recommendations concerning the research framework itself can be derived. This research only focuses on flight anxiety as a potential moderator on towards the impact of a Mindfulness Service and passengers’ satisfaction, and whether it has an effect on airline purchase intention and willingness to pay. Future research could also investigate its impact as a moderator in the relationship between satisfaction and the dependent variables. The findings could be further used for targeting measures and marketing optimization strategies. Besides, other potential moderating variables influencing the relationship between the constructs are worth investigating. For instance, previous studies have found demographics, as well trip purpose significant factors in purchase behavior regarding ancillary services (Balcombe et al. 2009, Chen & Wu 2009). Besides, prior meditation training or mindfulness practices in other context could directly influence the impact of a Mindfulness Service on satisfaction or behavioral intentions. Hence, along with factors, such as age, gender, income or trip purpose, it could be tested whether prior meditation training or certain behavioral characteristics, such as trait mindfulness or consumer’s categorical classification regarding new product adoption, have a moderating influence on the level of satisfaction, airline purchase intention or willingness to pay. Moreover, different airline aspects, such as type (LCC vs. FSC) and brand image or other aspects could be tested for potential influencing effects regarding the impact of a Mindfulness Service on satisfaction and airline purchase intention.

**Conclusion**

This study is contributing to existing literature on the emerging (westernized) concept of mindfulness and consumer behaviour by shedding light on the impact of mindfulness meditation as a service on consumer satisfaction and behavioral intentions in the airline industry. Moreover, study results provide evidence that an added Mindfulness Service to the regular in-flight entertainment program increases passenger satisfaction, therefore, the main research question can be confirmed. Further, underlining the strategic importance of this finding, results suggest that an enhanced satisfaction level due to the Mindfulness Service is associated with higher consumer willingness to pay for the service, as well as higher airline purchase intention, although, the mean value of the airline purchase intention variables for short- and long-haul flights indicate that passengers do not intent to choose an airline with a
Mindfulness Service solely due to this offered service. Hence, an added Mindfulness Service might lead to transaction-specific consumer satisfaction rather than to overall satisfaction which is based on all the experiences with a particular firm, thus, reflects various attributes of it (Garbarino and Johnson, 1999).

Furthermore, it has been identified that flight anxiety exerts a significant influence on the perceived satisfaction with the Mindfulness Service, in particular, it shows a moderating effect, indicating that passengers with a higher level of anxiety are likely to be more satisfied with it than lower level anxiety passengers. The same results can be derived for airline purchase intention and willingness to pay, underlying the influence of flight anxiety. Besides, comparing the results between short- and long-haul flights, passengers seem to be slightly more satisfied with the Mindfulness Service on short-haul flights, however, airline purchase intention and willingness to pay seem to be more positively affected during long-haul flights.

All in all, these findings provide meaningful implications for airline management in terms of customer satisfaction enhancement and perhaps anxiety reduction, ancillary revenue drivers, as well as customer acquisition/retention and marketing strategies.

In conclusion, with its significant positive effects, meditation-based mindfulness is proven to be a considerable force, becoming more and more valuable for the westernized world. With companies already grasping the emerging trend and potential of mindfulness as a business model, the business world has sat its foot into a new setting of mindfulness, one that holds the potential to generate great benefits for both consumers and businesses.
References


### Appendices

#### Overview

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APPENDIX A

Target Population

A1 Air Passenger in Germany

Source: Statista, 2020

Figure 5: Age distribution of air passengers in Germany 2020
APPENDIX B

Survey Development

B1 Survey Measurement Scales

**Anxiety**


How would you rate your anxiety level during flights?

**Satisfaction**


**Satisfaction without Mindfulness Service Short-haul**

Imagine you have the following services as part of the in-flight entertainment on a short-haul flight available: a board catalog, internet access (charges depending on the internet package).

Please indicate to what extent you would be satisfied with the service offering.

**Satisfaction with Mindfulness Service Short-haul**

Now imagine that the airline additionally offers a Mindfulness program to the in-flight entertainment program.

Please indicate to what extent you would be satisfied with the program now.

**Satisfaction without Mindfulness Service Long-haul**

Imagine you have the following services as part of the in-flight entertainment on a long-haul flight available: travel route/destination information, selection of movies, music (-videos) and games, internet access (for a fee).

Please indicate to what extent you would be satisfied with this service offering.
Satisfaction with Mindfulness Service Short-haul

Now imagine the Airline additionally offers a Mindfulness Service to the in-flight entertainment program.

Please indicate to what extent you would be satisfied with the program now.

**Willingness to Pay**


Please indicate the maximum price (in euros) you are willing to pay during a short-haul/long-haul flight.

**Airline Purchase Intention**


Please indicate to what extent the following statements apply to you regarding a short-haul/long-haul flight.

1. I would actively search for an airline offering a Mindfulness program.*
2. In the future, I will consider an airline offering a Mindfulness program as my first choice to buy.
3. I will recommend an airline offering a Mindfulness Service to other people.

*Personal Suggestion
Thank you for taking part in this consumer research as part of my Master Thesis.

The term mindfulness has gained increasing popularity in the western world and becomes more and more a focus in many people's everyday life. The research shall investigate whether airlines benefit from offering a Mindfulness service as part of the in-flight entertainment in order to reduce stress and anxiety during a flight and enhance passengers' well-being and comfort level.

The survey should only take approximately 5 minutes and your responses are completely anonymous. Please answer all the following questions intuitively. Every information you provide is very valuable and will of course be treated confidentially. I appreciate your input!

---

Vielen Dank für Ihre Teilnahme an dieser Studie als Teil meiner Masterarbeit.

Der Begriff Mindfulness (zu Deutsch: Achtsamkeit) ist mittlerweile ein vermehrt auftretendes Schlagwort und rückt bei vielen immer mehr in den Fokus während verschiedenster Alltagssituationen.

In der Studie gilt es herauszufinden, ob es sich für Airlines anbietet einen Mindfulness Service im Rahmen des Unterhaltungsprogramms an Bord anzubieten, um dadurch Stress, Unwohlsein oder Angst zu reduzieren und damit das Wohlbefinden und die Zufriedenheit der Passagiere an Bord zu verbessern bzw. zu erhöhen.

Die Umfrage dauert ca. 5 Minuten. Bitte beantworten Sie die Fragen intuitiv - Ihre Antworten sind anonym und Ihre Meinung wird sehr geschätzt! Vielen Dank!

---

**Questions**

**Flying Behavior**

Please indicate the approximate amount of **flights** you take on average within one year. (One trip to the Caribbean = two flights)

*Scale from 0 - 10*+

Wie oft im Jahr reisen Sie normalerweise mit dem Flugzeug? Bitte geben Sie die durchschnittliche Anzahl an **Flügen** an, die sie in einem Jahr tätigen. (Ein Karibikurlaub = zwei Flüge)

*Skala von 0 - 10*+
Please indicate the reason for most of your travels.

- Business
- Leisure
- Visits Partner / Family
- Others

How would you rate your anxiety level during flights?

I = No anxiety /discomfort; 7 = Extreme anxiety

Do you sometimes avoid taking a flight mainly due to your anxiety?

Never, Rarely, Occasionally, Often, Always

What are you doing before or during the flight to reduce your anxiety?

- Medication
- Alcohol, Relaxation/ Distraction via Meditation/ Yoga
- Flight Phobia Seminars
- Others
- Nothing

Introduction Mindfulness (Service) and Willingness to Use

Have you heard of the term or practice Mindfulness before?

Never, Rarely, Occasionally, Often, Very Often

I am aware of what Mindfulness is and how one can practice it.

I = Strongly disagree; 7 = Strongly agree
<table>
<thead>
<tr>
<th>Are you practicing or have you ever practiced Mindfulness? (e.g. yoga or meditation, like breathing exercises)</th>
<th>Praktizieren Sie oder haben Sie schon einmal Mindfulness praktiziert (z.B. durch Meditation oder Yoga)?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never, Rarely, Occasionally, Often, Very Often</td>
<td>Noch nie, Selten, Gelegentlich, Oft, Sehr oft</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Are you using or have you ever used a mobile Mindfulness App, such as &quot;Headspace&quot; or &quot;Calm&quot;?</th>
<th>Benutzen Sie oder haben Sie schon einmal eine Mindfulness App (z.B. Headspace oder Calm) benutzt?</th>
</tr>
</thead>
</table>
| ➢ I have never tried a mindfulness app  
 gà I have tried a mindfulness app  
 gà I sometimes use a mindfulness app  
 gà I have subscribed to a mindfulness app and use it often | ➢ Ich habe noch nie eine Mindfulness App benutzt  
 gà Ich habe schon einmal eine Mindfulness App benutzt  
 gà Ich benutze manchmal eine Mindfulness App  
 gà Ich habe eine Mindfulness App abonniert und nutze diese regelmäßig |

---

**Please read the short description of Mindfulness and its integration into the airline industry**

Mindfulness is described as a state of consciousness and nonjudgmental awareness of moment-to-moment experiences. It is most often associated with the formal practice of mindfulness meditation. Various types of meditation exercises can be used to get into a state of relaxation in which the body and mind are able to relieve stress and tension.

When thinking of Mindfulness as a service in the Airline Industry, you can think of customers having access to digital meditation services, either via apps like Headspace or Calm or via an internal board program as part of the in-flight entertainment. Audio or video sessions are geared towards the specific stresses that often occur during air travel. These could entail breathing- or body relaxation exercises, guided visualizations or sleep meditation.

**Bitte lesen Sie die kurze Beschreibung von Mindfulness und seiner Integration in die Airline Industrie**


Mindfulness als Service in der Airline Industrie würde bedeuten, dass im Rahmen des Unterhaltungsprogramms an Bord den Passagieren Zugang zu digitalen Mindfulness Übungen angeboten werden. Dies kann entweder über das interne Bordprogramm oder über digitale Apps wie Headspace oder Calm auf dem eigenen Smartphone erfolgen. Dabei kann mit Hilfe von Audio- oder Video-Einheiten auf die spezifischen Belastungen von Passagieren...
Imagine an airline you are flying with offers a Mindfulness service program on board. Would you make use of Mindfulness "exercises" (e.g. stress reduction meditation or sleep meditation) during a flight?

Would the flight duration affect your choice of answer?

For the purpose of this study, please assume that a short-haul flight covers a route of up to around 1500 km (max. 3 hours) and a long-haul flight a minimum of 3500 km (min. 6 hours).

Please indicate whether you agree or disagree with the following statements for a short-haul flight & long-haul flight

I = Strongly disagree; 7 = Strongly agree

- I would be willing to make use of Mindfulness exercises during a flight.
- It is likely that I would make use of Mindfulness exercises during a flight.
- I intent to make use of Mindfulness exercises during a flight.

* This question was asked for both short- and long-haul flights

*This question was asked for both short- and long-haul flights

---

**Note:**
- **Short-haul flight** covers a route of up to around 1500 km (max. 3 hours).
- **Long-haul flight** a minimum of 3500 km (min. 6 hours).
- For the purpose of this study, please assume that a short-haul flight covers a route of up to around 1500 km (max. 3 hours) and a long-haul flight a minimum of 3500 km (min. 6 hours).

Please indicate whether you agree or disagree with the following statements for a short-haul flight & long-haul flight

I = Strongly disagree; 7 = Strongly agree

- I would be willing to make use of Mindfulness exercises during a flight.
- It is likely that I would make use of Mindfulness exercises during a flight.
- I intent to make use of Mindfulness exercises during a flight.

* This question was asked for both short- and long-haul flights

*This question was asked for both short- and long-haul flights

---

**Note:**
- **Short-haul flight** covers a route of up to around 1500 km (max. 3 hours).
- **Long-haul flight** a minimum of 3500 km (min. 6 hours).
- For the purpose of this study, please assume that a short-haul flight covers a route of up to around 1500 km (max. 3 hours) and a long-haul flight a minimum of 3500 km (min. 6 hours).

Please indicate whether you agree or disagree with the following statements for a short-haul flight & long-haul flight

I = Strongly disagree; 7 = Strongly agree

- I would be willing to make use of Mindfulness exercises during a flight.
- It is likely that I would make use of Mindfulness exercises during a flight.
- I intent to make use of Mindfulness exercises during a flight.

* This question was asked for both short- and long-haul flights

*This question was asked for both short- and long-haul flights
## Satisfaction

<table>
<thead>
<tr>
<th>Imagine you have the following services as part of the in-flight entertainment on a short-haul flight available: a board catalog, internet access (charges depending on the internet package).</th>
<th>Stellen Sie sich vor, während eines Kurzstreckenfluges wird folgendes Unterhaltungsprogramm angeboten: Bordkatalog, Internetzugang (gegen Entgelt).</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please indicate to what extent you would be satisfied with the service offering.</td>
<td>Bitte geben Sie an, inwieweit Sie mit dem Unterhaltungsprogramm an Bord zufrieden wären.</td>
</tr>
<tr>
<td><em>I</em> = Completely unsatisfied; <em>7</em> = Completely satisfied</td>
<td><em>I</em> = Vollkommen unzufrieden; <em>7</em> = Vollkommen zufrieden</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Now imagine that the airline additionally offers a Mindfulness program to the in-flight entertainment program.</th>
<th>Stellen Sie sich jetzt vor, die Airline würde zusätzlich noch ein Mindfulness Programm anbieten.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please indicate to what extent you would be satisfied with the program now.</td>
<td>Bitte geben Sie an, inwieweit Sie nun mit dem Unterhaltungsprogramm an Bord zufrieden wären.</td>
</tr>
<tr>
<td><em>I</em> = Completely unsatisfied; <em>7</em> = Completely satisfied</td>
<td><em>I</em> = Vollkommen unzufrieden; <em>7</em> = Vollkommen zufrieden</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Imagine you have the following services as part of the in-flight entertainment on a long-haul flight available: travel route/destination information, selection of movies, music (-videos) and games, internet access (for a fee).</th>
<th>Stellen Sie sich vor, während eines Langstreckenfluges wird folgendes Unterhaltungsprogramm angeboten: Informationen zur Reiseroute und Reiseziel, Auswahl von Filmen, Musik (-videos) und Spielen auf dem persönlichen Bordfernseher, Internetzugang (gegen Entgelt). Bitte geben Sie an, inwieweit Sie mit diesem Unterhaltungsprogramm an Bord zufrieden wären.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please indicate to what extent you would be satisfied with this service offering.</td>
<td>Bitte geben Sie an, inwieweit Sie mit diesem Unterhaltungsprogramm an Bord zufrieden wären.</td>
</tr>
<tr>
<td><em>I</em> = Completely unsatisfied; <em>7</em> = Completely satisfied</td>
<td><em>I</em> = Vollkommen unzufrieden; <em>7</em> = Vollkommen zufrieden</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Now imagine the Airline additionally offers a Mindfulness Service to the in-flight entertainment program.</th>
<th>Stellen Sie sich jetzt vor, die Airline würde zusätzlich noch ein Mindfulness Programm anbieten.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Please indicate to what extent you would be satisfied with the program now.</td>
<td>Bitte geben Sie an, inwieweit Sie nun mit dem Unterhaltungsprogramm an Bord zufrieden wären.</td>
</tr>
<tr>
<td><em>I</em> = Completely unsatisfied; <em>7</em> = Completely satisfied</td>
<td><em>I</em> = Vollkommen unzufrieden; <em>7</em> = Vollkommen zufrieden</td>
</tr>
</tbody>
</table>
Willingness to Pay

Imagine you are booking a flight and you are given the option to purchase the Mindfulness program in return of a small fee.

Please indicate the maximum price (in euros) you are willing to pay during a short-haul / long-haul flight.

* This question was asked for both short- and long-haul flights

Airline Purchase Intention

Please indicate to what extent the following statements apply to you regarding a short-haul / long-haul flight.

1=Very unlikely; 7= Very likely

- In the future, I would actively search for an airline offering a Mindfulness program.
- In the future, I will consider an airline offering a Mindfulness program as my first choice to buy.
- I will recommend an airline offering a Mindfulness Service to other people.

*This question was asked for both short- and long-haul flights

*Note: The last part included participants’ demographics
APPENDIX C

Survey Findings

C1 Statistical Analysis of Variables

Agenda:

Satisfaction
SHSATNM = Satisfaction without the Mindfulness Service on Short-haul flights
SHSATMS = Satisfaction with the Mindfulness Service on Long-haul flights
LHSATNM = Satisfaction without the Mindfulness Service on Short-haul flights
LHSATMS = Satisfaction with the Mindfulness Service on Long-haul flights

Airline Purchase Intention
SHAPI = Airline Purchase Intention on Short-haul flights
LHAPI = Airline Purchase Intention on Long-haul flights

Willingness to Pay
SHWTP = Willingness to pay on Short-haul flights
LHWTP = Willingness to pay on Long-haul flights
Hypothesis 1: Mindfulness Service on Satisfaction

Table 3: Paired Sample T-Test Analysis Results – MS on Satisfaction
**Hypothesis 2: Anxiety on Satisfaction**

**Short-haul**

**Anxiety on SAT without MS**

### Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.168*</td>
<td>.026</td>
<td>-.004</td>
<td>1.415</td>
<td>.025</td>
<td>.853</td>
<td>4</td>
<td>122</td>
<td>.476</td>
</tr>
</tbody>
</table>

*a. Predictors: (Constant), EDU, Age, Anxiety, Gender  
b. Dependent Variable: SHSATNM*

### ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>7,067</td>
<td>4</td>
<td>1,767</td>
<td>.883</td>
<td>.476*</td>
</tr>
<tr>
<td>Residual</td>
<td>244,115</td>
<td>122</td>
<td>2,001</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>251,181</td>
<td>126</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*a. Dependent Variable: SHSATNM  
b. Predictors: (Constant), EDU, Age, Anxiety, Gender*

### Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>3.251</td>
<td>.851</td>
<td>4.994</td>
</tr>
<tr>
<td>Anxiety</td>
<td>.045</td>
<td>.063</td>
<td>.067</td>
<td>.718</td>
</tr>
<tr>
<td>Gender</td>
<td>.116</td>
<td>.287</td>
<td>.039</td>
<td>.404</td>
</tr>
<tr>
<td>Age</td>
<td>-.141</td>
<td>.101</td>
<td>-.132</td>
<td>-1.392</td>
</tr>
<tr>
<td>EDU</td>
<td>.158</td>
<td>.146</td>
<td>.103</td>
<td>1.087</td>
</tr>
</tbody>
</table>

*a. Dependent Variable: SHSATNM*

Table 4: Linear Regression Analysis Results – Anxiety on Satisfaction without MS on Short-haul
### Anxiety on SAT with MS Short-haul

#### Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.422</td>
<td>.180</td>
<td>.110</td>
<td>.143</td>
<td>.177</td>
<td>6.564</td>
<td>4</td>
<td>122</td>
<td>.000</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), EDU, Age, Anxiety, Gender
b. Dependent Variable: HSATMSS

#### ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>4</td>
<td>11.844</td>
<td>6.564</td>
<td>.000</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>122</td>
<td>1.805</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>126</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: HSATMS
b. Predictors: (Constant), EDU, Age, Anxiety, Gender

#### Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(Constant)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anxiety</td>
<td>.183</td>
<td>.261</td>
<td>.003</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>.667</td>
<td>.216</td>
<td>.016</td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td>-.199</td>
<td>-.181</td>
<td>.041</td>
</tr>
<tr>
<td></td>
<td>EDU</td>
<td>.091</td>
<td>.057</td>
<td>.512</td>
</tr>
</tbody>
</table>

a. Dependent Variable: HSATMS

Table 5: Linear Regression Analysis Results – Anxiety on Satisfaction with MS on short-haul

### Long-haul

#### SAT without MS Long-haul

#### Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.107</td>
<td>.011</td>
<td>-.021</td>
<td>1.226</td>
<td>.011</td>
<td>.351</td>
<td>4</td>
<td>122</td>
<td>.843</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), EDU, Age, Anxiety, Gender
b. Dependent Variable: HSATNM

#### ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>4</td>
<td>.528</td>
<td>.351</td>
<td>.843</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>122</td>
<td>1.562</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>126</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: HSATNM
b. Predictors: (Constant), EDU, Age, Anxiety, Gender

#### Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(Constant)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Anxiety</td>
<td>-.011</td>
<td>-.018</td>
<td>.949</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>.090</td>
<td>.363</td>
<td>.718</td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td>-.084</td>
<td>-.092</td>
<td>.954</td>
</tr>
<tr>
<td></td>
<td>EDU</td>
<td>.019</td>
<td>.148</td>
<td>.882</td>
</tr>
</tbody>
</table>

a. Dependent Variable: HSATNM

Table 6: Linear Regression Analysis Results – Anxiety on Satisfaction without MS on Long-haul
Appendices

SAT with MS Long-haul

Table 7: Linear Regression Analysis Results – Anxiety on Satisfaction with MS on Long-haul

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.365a</td>
<td>.134</td>
<td>.105</td>
<td>1.070</td>
<td>.134</td>
<td>4.701</td>
<td>4</td>
<td>122</td>
<td>.001</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), EDU, Age, Anxiety, Gender  
b. Dependent Variable: LHSATMS

ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Regression</td>
<td>21,331</td>
<td>4</td>
<td>5.143</td>
<td>4.701</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>139,681</td>
<td>122</td>
<td>1.145</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>161,213</td>
<td>126</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: LHSATMS  
b. Predictors: (Constant), EDU, Age, Anxiety, Gender

Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th></th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>5.062</td>
<td>.492</td>
<td>10.281</td>
</tr>
<tr>
<td></td>
<td>Anxiety</td>
<td>.169</td>
<td>.048</td>
<td>3.537</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>.365</td>
<td>.217</td>
<td>1.682</td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td>-.068</td>
<td>.077</td>
<td>-1.040</td>
</tr>
<tr>
<td></td>
<td>EDU</td>
<td>.128</td>
<td>.110</td>
<td>1.118</td>
</tr>
</tbody>
</table>

a. Dependent Variable: LHSATMS

Hypothesis 3: Satisfaction on API

Short-haul

Table 8: Linear Regression Analysis Results – Satisfaction on API Short-haul

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.442a</td>
<td>.196</td>
<td>.162</td>
<td>.80856495</td>
<td>.196</td>
<td>5.888</td>
<td>5</td>
<td>121</td>
<td>.000</td>
</tr>
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</table>

a. Predictors: (Constant), EDU, SHSATNM, Gender, Age, SHSATMS  
b. Dependent Variable: API_SH

ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
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<tr>
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<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
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<td>126</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: API_SH  
b. Predictors: (Constant), EDU, SHSATNM, Gender, Age, SHSATMS

Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th></th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
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<td>.435</td>
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<td>.393</td>
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<tr>
<td></td>
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<td>.063</td>
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<tr>
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<tr>
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<td>-.158</td>
<td>.082</td>
<td>-1.092</td>
</tr>
</tbody>
</table>

a. Dependent Variable: API_SH
Appendices

Long-haul

Table 9: Linear Regression Analysis Results –Satisfaction on API Long-haul

Hypothesis 3b: Satisfaction as a Mediator between Anxiety and API

Short-haul

Run MATRIX procedure:

************************** PROCESS Procedure for SPSS Version 3.5 **************************

     Written by Andrew F. Hayes, Ph.D.  www.afhayes.com
     Documentation available in Hayes (2018), www.guilford.com/p/hayes3

*******************************************************************************

Model : 4
  Y : API_SH
  X : Anxiety
  M1 : SHSATNS
  M2 : SHSATNM

Covariates:
   Gender  Age  EDU

Sample
   Size:  127

*******************************************************************************

OUTCOME VARIABLE:
   SHSATNS

Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
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<tr>
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<td>.524*</td>
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<td>.245</td>
<td>.85761959</td>
<td>.275</td>
<td>.165</td>
<td>5</td>
<td>121</td>
<td>.000</td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), EDU, LHSATNM, Age, Gender, LHSATNS
b. Dependent Variable: API_LH

ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>137,705</td>
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<td></td>
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<td></td>
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</tbody>
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a. Dependent Variable: API_LH
b. Predictors: (Constant), EDU, LHSATNM, Age, Gender, LHSATNS

d. Coefficients

<table>
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<tr>
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<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
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<td>.020</td>
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<td>LHSATNS</td>
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<td>.914</td>
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<tr>
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<td>-.244</td>
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<td>.232</td>
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</table>

a. Dependent Variable: API_LH

Table 9: Linear Regression Analysis Results –Satisfaction on API Long-haul

Hypothesis 3b: Satisfaction as a Mediator between Anxiety and API

Short-haul

Run MATRIX procedure:

************************** PROCESS Procedure for SPSS Version 3.5 **************************

     Written by Andrew F. Hayes, Ph.D.  www.afhayes.com
     Documentation available in Hayes (2018), www.guilford.com/p/hayes3

*******************************************************************************

Model : 4
  Y : API_SH
  X : Anxiety
  M1 : SHSATNS
  M2 : SHSATNM

Covariates:
   Gender  Age  EDU

Sample
   Size:  127

*******************************************************************************

OUTCOME VARIABLE:
   SHSATNS

Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R-sq</th>
<th>MSE</th>
<th>F(H0)</th>
<th>df1</th>
<th>df2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
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<td>.18</td>
<td>1.80</td>
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<td>4.00</td>
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<td>.00</td>
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Model

<table>
<thead>
<tr>
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<th>coeff</th>
<th>se(H0)</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
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</thead>
<tbody>
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<td>5.53</td>
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<td>.05</td>
<td>2.00</td>
<td>.00</td>
<td>.09</td>
<td>.28</td>
</tr>
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<td>Gender</td>
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<td>2.30</td>
<td>.02</td>
<td>.28</td>
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</tr>
<tr>
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<td>.04</td>
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<td>.00</td>
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<tr>
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<td>.71</td>
<td>.48</td>
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*******************************************************************************
### Appendices

**OUTCOME VARIABLE: SHSATNM**

<table>
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<th>R-sq</th>
<th>MSE</th>
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<th>df2</th>
<th>p</th>
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</thead>
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<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
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</thead>
<tbody>
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<td>.12</td>
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**OUTCOME VARIABLE: API_SH**

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<th>df2</th>
<th>p</th>
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<td>.00</td>
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<td>.37</td>
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<tr>
<td>EDU</td>
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<td>.08</td>
<td>-.05</td>
<td>.40</td>
<td>-.33</td>
<td>.09</td>
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Test(s) of X by M interaction:

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<th>p</th>
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<td>.00</td>
</tr>
<tr>
<td>M2xX</td>
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<td>.28</td>
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**TOTAL EFFECT MODEL**

**OUTCOME VARIABLE: API_SH**

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<th>R-sq</th>
<th>MSE</th>
<th>F(HCO)</th>
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<th>df2</th>
<th>p</th>
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</thead>
<tbody>
<tr>
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<table>
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<th>Model</th>
<th>coeff</th>
<th>se(HCO)</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
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<tbody>
<tr>
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<td>-1.56</td>
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<td>4.71</td>
<td>.00</td>
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<td>.24</td>
</tr>
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<td>.09</td>
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</table>

**TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y**

Total effect of X on Y

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<tr>
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<th>se(HCO)</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
<th>c_ps</th>
<th>c_cs</th>
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<tbody>
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<td>4.71</td>
<td>.00</td>
<td>.10</td>
<td>.24</td>
<td>.10</td>
</tr>
</tbody>
</table>

Direct effect of X on Y

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<th>se(HCO)</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
<th>c_ps</th>
<th>c_cs</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>.14</td>
<td>.04</td>
<td>4.00</td>
<td>.00</td>
<td>.07</td>
<td>.21</td>
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</table>
Indirect effect(s) of X on Y:

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<th>BootSE</th>
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<th>BootULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>.03</td>
<td>.01</td>
<td>.00</td>
</tr>
<tr>
<td>SMSATMS</td>
<td>.03</td>
<td>.01</td>
<td>.01</td>
</tr>
<tr>
<td>SHSATNM</td>
<td>.00</td>
<td>.01</td>
<td>-.03</td>
</tr>
</tbody>
</table>

Partially standardized indirect effect(s) of X on Y:

<table>
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<th>BootLLCI</th>
<th>BootULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>.03</td>
<td>.02</td>
<td>.00</td>
</tr>
<tr>
<td>SMSATMS</td>
<td>.03</td>
<td>.02</td>
<td>.01</td>
</tr>
<tr>
<td>SHSATNM</td>
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<td>.01</td>
<td>-.05</td>
</tr>
</tbody>
</table>

Completely standardized indirect effect(s) of X on Y:

<table>
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<tr>
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<th>BootSE</th>
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<th>BootULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>.06</td>
<td>.03</td>
<td>.00</td>
</tr>
<tr>
<td>SMSATMS</td>
<td>.07</td>
<td>.03</td>
<td>.01</td>
</tr>
<tr>
<td>SHSATNM</td>
<td>-.01</td>
<td>.02</td>
<td>-.06</td>
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</table>

-----------------------------------------------------------------------------------
ANALYSIS NOTES AND ERRORS

Level of confidence for all confidence intervals in output: 95,0000
Number of bootstrap samples for percentile bootstrap confidence intervals: 5000
NOTE: A heteroscedasticity consistent standard error and covariance matrix estimator was used.
-----------------------------------------------------------------------------------

Table 10: Mediation Analysis Results via PROCESS – Satisfaction on API Long-haul

Long-haul

Run MATRIX procedure:

xxxxxxxxxxxxxxx PROCESS Procedure for SPSS Version 3.5 xxxxxxxxxx

Written by Andrew F. Hayes, Ph.D. www.afhayes.com

xxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxxx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**OUTCOME VARIABLE:**
LHSATNM

Model Summary

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<tr>
<th>R</th>
<th>R-sq</th>
<th>MSE</th>
<th>F(HCO0)</th>
<th>df1</th>
<th>df2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.81</td>
<td>1.50</td>
<td>53</td>
<td>4.00</td>
<td>122.00</td>
<td>0.72</td>
<td></td>
</tr>
</tbody>
</table>

Model

<table>
<thead>
<tr>
<th>coeff</th>
<th>se(HCO0)</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>constant</td>
<td>5.50</td>
<td>0.51</td>
<td>9.08</td>
<td>0.00</td>
<td>4.30</td>
</tr>
<tr>
<td>Anxiety</td>
<td>-1.01</td>
<td>0.05</td>
<td>-2.10</td>
<td>0.04</td>
<td>-1.10</td>
</tr>
<tr>
<td>Gender</td>
<td>-0.08</td>
<td>0.08</td>
<td>-0.10</td>
<td>0.08</td>
<td>-0.24</td>
</tr>
<tr>
<td>EDU</td>
<td>0.02</td>
<td>0.12</td>
<td>0.15</td>
<td>0.88</td>
<td>-0.22</td>
</tr>
</tbody>
</table>

**OUTCOME VARIABLE:**
API_LH

Model Summary

<table>
<thead>
<tr>
<th>R</th>
<th>R-sq</th>
<th>MSE</th>
<th>F(HCO0)</th>
<th>df1</th>
<th>df2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.65</td>
<td>0.42</td>
<td>0.99</td>
<td>25.60</td>
<td>6.00</td>
<td>120.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Model

<table>
<thead>
<tr>
<th>coeff</th>
<th>se(HCO0)</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>constant</td>
<td>-1.57</td>
<td>0.44</td>
<td>-3.61</td>
<td>0.00</td>
<td>-2.43</td>
</tr>
<tr>
<td>Anxiety</td>
<td>0.20</td>
<td>0.04</td>
<td>5.66</td>
<td>0.00</td>
<td>0.13</td>
</tr>
<tr>
<td>LHSATNM</td>
<td>0.26</td>
<td>0.07</td>
<td>3.02</td>
<td>0.00</td>
<td>0.23</td>
</tr>
<tr>
<td>Gender</td>
<td>0.37</td>
<td>0.15</td>
<td>2.39</td>
<td>0.02</td>
<td>0.06</td>
</tr>
<tr>
<td>Age</td>
<td>0.02</td>
<td>0.05</td>
<td>0.40</td>
<td>0.89</td>
<td>-0.08</td>
</tr>
<tr>
<td>EDU</td>
<td>-0.07</td>
<td>0.08</td>
<td>-0.08</td>
<td>0.38</td>
<td>-0.23</td>
</tr>
</tbody>
</table>

Test(s) of X by M interaction:

<table>
<thead>
<tr>
<th>F(HCO0)</th>
<th>df1</th>
<th>df2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>M1<em>x</em>X</td>
<td>12.34</td>
<td>1.00</td>
<td>119.00</td>
</tr>
<tr>
<td>M2<em>x</em>X</td>
<td>2.60</td>
<td>1.00</td>
<td>119.00</td>
</tr>
</tbody>
</table>

**OUTCOME VARIABLE:**
API_LH

Model Summary

<table>
<thead>
<tr>
<th>R</th>
<th>R-sq</th>
<th>MSE</th>
<th>F(HCO0)</th>
<th>df1</th>
<th>df2</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.61</td>
<td>0.37</td>
<td>0.63</td>
<td>24.29</td>
<td>4.00</td>
<td>122.00</td>
<td>0.00</td>
</tr>
</tbody>
</table>

Model

<table>
<thead>
<tr>
<th>coeff</th>
<th>se(HCO0)</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>constant</td>
<td>-0.05</td>
<td>0.38</td>
<td>-0.22</td>
<td>0.83</td>
<td>-1.61</td>
</tr>
<tr>
<td>Anxiety</td>
<td>0.25</td>
<td>0.04</td>
<td>6.01</td>
<td>0.00</td>
<td>0.18</td>
</tr>
<tr>
<td>Gender</td>
<td>0.45</td>
<td>0.16</td>
<td>2.83</td>
<td>0.01</td>
<td>0.14</td>
</tr>
<tr>
<td>Age</td>
<td>0.01</td>
<td>0.05</td>
<td>0.23</td>
<td>0.82</td>
<td>-0.09</td>
</tr>
<tr>
<td>EDU</td>
<td>-0.04</td>
<td>0.08</td>
<td>-0.47</td>
<td>0.64</td>
<td>-0.21</td>
</tr>
</tbody>
</table>

**TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y**

Total effect of X on Y

<table>
<thead>
<tr>
<th>Effect se(HCO0)</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
<th>c_ps</th>
<th>c_cs</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.25</td>
<td>0.04</td>
<td>6.91</td>
<td>0.00</td>
<td>0.18</td>
<td>0.32</td>
<td>0.25</td>
</tr>
</tbody>
</table>

Direct effect of X on Y

<table>
<thead>
<tr>
<th>Effect se(HCO0)</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
<th>c_ps</th>
<th>c_cs</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.20</td>
<td>0.04</td>
<td>5.66</td>
<td>0.00</td>
<td>0.13</td>
<td>0.28</td>
<td>0.21</td>
</tr>
</tbody>
</table>
Appendices

Table 11: Mediation Analysis Results via PROCESS – Satisfaction on API Long-haul

**Hypothesis 4: Satisfaction on Willingness to Pay**

**Short-haul**

### Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of Estimate</th>
<th>R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.409</td>
<td>.167</td>
<td>.132</td>
<td>3.415</td>
<td>.167</td>
<td>4.848</td>
<td>5</td>
<td>121</td>
<td>.090</td>
</tr>
</tbody>
</table>

*a. Predictors: (Constant), EDU, SHSATNM, Gender, Age, SHSATMS*  
*b. Dependent Variable: WTP_SH*

### ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>282.605</td>
<td>5</td>
<td>56.521</td>
<td>4.848</td>
<td>.000</td>
</tr>
<tr>
<td>Residual</td>
<td>1410.797</td>
<td>121</td>
<td>11.659</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>1693.402</td>
<td>126</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*a. Dependent Variable: WTP_SH*  
*b. Predictors: (Constant), EDU, SHSATNM, Gender, Age, SHSATMS*

### Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B (Standard Error)</td>
<td>(Beta, Std. Error)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>-.171 (.833)</td>
<td>-.093</td>
<td>.296</td>
</tr>
<tr>
<td></td>
<td>SHSATMS</td>
<td>.920 (.209)</td>
<td>.666</td>
<td>.001</td>
</tr>
<tr>
<td></td>
<td>SHSATNM</td>
<td>-.195 (.264)</td>
<td>-.075</td>
<td>.462</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>.888 (.713)</td>
<td>.114</td>
<td>.124</td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td>.426 (.247)</td>
<td>.154</td>
<td>.724</td>
</tr>
<tr>
<td></td>
<td>EDU</td>
<td>-.617 (.344)</td>
<td>-.154</td>
<td>.790</td>
</tr>
</tbody>
</table>

*a. Dependent Variable: WTP_SH*

Table 12: Regression Analysis Results – Satisfaction on WTP Short-haul
## Long-haul

### Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
<th>R Square Change</th>
<th>F Change</th>
<th>df1</th>
<th>df2</th>
<th>Sig. F Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.373&lt;sup&gt;a&lt;/sup&gt;</td>
<td>.139</td>
<td>.103</td>
<td>5.266</td>
<td>.139</td>
<td>3.899</td>
<td>5</td>
<td>121</td>
<td>.003</td>
</tr>
</tbody>
</table>

<sup>a</sup> Predictors: (Constant, EDU, LHSATNM, Age, Gender, LHSATMS)

<sup>b</sup> Dependent Variable: WTP_LH

### ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>540,625</td>
<td>5</td>
<td>108,125</td>
<td>3.899</td>
<td>.003</td>
</tr>
<tr>
<td>Residual</td>
<td>3155,249</td>
<td>121</td>
<td>27,729</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>3895,874</td>
<td>126</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<sup>a</sup> Dependent Variable: WTP_LH

<sup>b</sup> Predictors: (Constant), EDU, LHSATNM, Age, Gender, LHSATMS

### Coefficients

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>(Constant)</td>
<td>-.481</td>
<td>3.452</td>
<td>-.139</td>
</tr>
<tr>
<td></td>
<td>LHSATMS</td>
<td>1.634</td>
<td>.507</td>
<td>.332</td>
</tr>
<tr>
<td></td>
<td>LHSATNM</td>
<td>-.397</td>
<td>.464</td>
<td>-.086</td>
</tr>
<tr>
<td></td>
<td>Gender</td>
<td>1.218</td>
<td>1.082</td>
<td>.103</td>
</tr>
<tr>
<td></td>
<td>Age</td>
<td>.521</td>
<td>.378</td>
<td>.124</td>
</tr>
<tr>
<td></td>
<td>EDU</td>
<td>-.994</td>
<td>.528</td>
<td>-.164</td>
</tr>
</tbody>
</table>

<sup>a</sup> Dependent Variable: WTP_LH

Table 13: Regression Analysis Results – Satisfaction on WTP Long-haul
Hypothesis 4b: Satisfaction as a Mediator between Anxiety and WTP

Short-haul

Run MATRIX procedure:

*************** PROCESS Procedure for SPSS Version 3.5 ***************

Written by Andrew F. Hayes, Ph.D. www.afhayes.com

*******************************************************************************
Model :  4
Y : WTP_SH
X : Anxiety
M1 : SHSATMS
M2 : SHSATMM

Covariates:
Gender  Age  EDU

Sample Size:  127

*******************************************************************************
OUTCOME VARIABLE:  SHSATMS

Model Summary
R   R-sq  MSE  F(H(0))  df1  df2  p
.42  .18  1.00  7.17  4.00  122.00  .00

Model

coeff  se(H(0))  t  p  LLCI  ULCI
constant  4.21  .67  6.32  .00  2.89  5.53
Anxiety  .18  .05  3.40  .00  .09  .28
Gender  .07  .29  2.31  .02  .09  1.24
Age  -.28  .19  -1.53  .13  -.39  .00
EDU  .09  .13  .71  .48  -.26  .34

*******************************************************************************
OUTCOME VARIABLE:  SHSATMM

Model Summary
R   R-sq  MSE  F(H(0))  df1  df2  p
.17  .03  2.00  .74  4.00  122.00  .56

Model

coeff  se(H(0))  t  p  LLCI  ULCI
constant  3.25  .67  4.83  .00  1.92  4.58
Anxiety  .05  .06  .71  .48  -.04  .67
Gender  .12  .28  .41  .68  -.35  .07
Age  -.14  .11  -1.32  .19  -.35  .07
EDU  .16  .15  1.04  .30  -.14  .46

*******************************************************************************
OUTCOME VARIABLE:  WTP_SH

Model Summary
R   R-sq  MSE  F(H(0))  df1  df2  p
.56  .32  9.65  8.63  6.00  128.00  .00

Model

coeff  se(H(0))  t  p  LLCI  ULCI
constant  -1.34  1.58  -1.25  .24  -4.48  1.79
Anxiety  .18  .42  .42  .67  .38  1.09
Gender  .56  1.8  3.05  .00  .19  .92
SHSATMS  -.06  .24  -2.6  .00  -.33  .41
SHSATMM  -.12  .22  -1.31  .19  -.15  .74
EDU  -.26  .36  -0.72  .47  -.96  .45

Test(s) of X by M interaction:
F(H(0)) df1  df2  p
M1+X  .10  1.00  119.00  .76
M2+X  .24  1.00  119.00  .63
### Table 14: Mediation Analysis Results via PROCESS – Satisfaction on WTP Short-haul

<table>
<thead>
<tr>
<th>Variable</th>
<th>Effect</th>
<th>BootSE</th>
<th>BootLLCI</th>
<th>BootULCI</th>
<th>CCI</th>
<th>CCSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>.10</td>
<td>.04</td>
<td>.02</td>
<td>.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IHGAINS</td>
<td>.10</td>
<td>.05</td>
<td>.02</td>
<td>.22</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IHGAINM</td>
<td>.00</td>
<td>.02</td>
<td>.06</td>
<td>.03</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Partially standardized indirect effect(s) of X on Y:

<table>
<thead>
<tr>
<th>Effect</th>
<th>BootSE</th>
<th>BootLLCI</th>
<th>BootULCI</th>
<th>CCI</th>
<th>CCSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>.03</td>
<td>.01</td>
<td>.01</td>
<td>.05</td>
<td></td>
</tr>
<tr>
<td>IHGAINS</td>
<td>.03</td>
<td>.01</td>
<td>.01</td>
<td>.06</td>
<td></td>
</tr>
<tr>
<td>IHGAINM</td>
<td>.00</td>
<td>.01</td>
<td>.02</td>
<td>.01</td>
<td></td>
</tr>
</tbody>
</table>

Completely standardized indirect effect(s) of X on Y:

<table>
<thead>
<tr>
<th>Effect</th>
<th>BootSE</th>
<th>BootLLCI</th>
<th>BootULCI</th>
<th>CCI</th>
<th>CCSI</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>.02</td>
<td>.02</td>
<td>.02</td>
<td>.12</td>
<td></td>
</tr>
<tr>
<td>IHGAINS</td>
<td>.06</td>
<td>.03</td>
<td>.01</td>
<td>.03</td>
<td></td>
</tr>
<tr>
<td>IHGAINM</td>
<td>.00</td>
<td>.01</td>
<td>.03</td>
<td>.02</td>
<td></td>
</tr>
</tbody>
</table>

Level of confidence for all confidence intervals in output: 95,0000

Number of bootstrap samples for percentile bootstrap confidence intervals: 5000

NOTE: A heteroscedasticity consistent standard error and covariance matrix estimator was used.

--- END MATRIX ---
Appendices

Long-haul

Run MATRIX procedure:

**************************** PROCESS Procedure for SPSS Version 3.5 ****************************

Written by Andrew F. Hayes, Ph.D.  www.afhayes.com

Model: 4
Y : WTP_LH
X : Anxiety
M1 : LHSATMS
M2 : LHSATNM

Covariates:
Gender  Age  EDU

Sample Size: 127

*****************************************************************************
OUTCOME VARIABLE: LHSATMS
*****************************************************************************

Model Summary

\[
\begin{array}{cccccc}
R & R^2 & MSE & F(HC0) & df1 & df2 & p \\
\hline
0.37 & 0.13 & 1.14 & 8.67 & 4.00 & 122.00 & 0.00 \\
\end{array}
\]

Model

\[
\begin{array}{ccccc}
\text{coeff} & \text{se(HC0)} & t & p & LCLI & UCLI \\
\hline
\text{constant} & 5.06 & 0.48 & 10.49 & 0.00 & 4.11 & 6.02 \\
\text{Anxiety} & 0.17 & 0.04 & 4.27 & 0.00 & 0.09 & 0.25 \\
\text{Gender} & 0.37 & 0.23 & 1.62 & 0.11 & -0.08 & 0.81 \\
\text{Age} & -0.07 & 0.08 & -0.89 & 0.38 & -0.22 & 0.08 \\
\text{EDU} & 0.12 & 0.10 & 1.23 & 0.22 & -0.87 & 0.32 \\
\end{array}
\]

*****************************************************************************
OUTCOME VARIABLE: LHSATNM
*****************************************************************************

Model Summary

\[
\begin{array}{cccccc}
R & R^2 & MSE & F(HC0) & df1 & df2 & p \\
\hline
0.11 & 0.01 & 1.50 & 0.53 & 4.00 & 122.00 & 0.72 \\
\end{array}
\]

Model

\[
\begin{array}{ccccc}
\text{coeff} & \text{se(HC0)} & t & p & LCLI & UCLI \\
\hline
\text{constant} & 5.50 & 0.61 & 9.08 & 0.00 & 4.30 & 6.70 \\
\text{Anxiety} & -0.11 & 0.05 & -2.11 & 0.04 & -0.11 & 0.09 \\
\text{Gender} & 0.09 & 0.22 & 0.41 & 0.68 & -0.35 & 0.53 \\
\text{Age} & -0.08 & 0.06 & -1.04 & 0.30 & -0.24 & 0.08 \\
\text{EDU} & 0.02 & 0.12 & 0.15 & 0.88 & -0.22 & 0.26 \\
\end{array}
\]

*****************************************************************************
OUTCOME VARIABLE: WTP_LH
*****************************************************************************

Model Summary

\[
\begin{array}{cccccc}
R & R^2 & MSE & F(HC0) & df1 & df2 & p \\
\hline
0.52 & 0.27 & 23.66 & 11.30 & 6.00 & 128.00 & 0.00 \\
\end{array}
\]

Model

\[
\begin{array}{ccccc}
\text{coeff} & \text{se(HC0)} & t & p & LCLI & UCLI \\
\hline
\text{constant} & -1.75 & 2.75 & -0.64 & 0.52 & -7.19 & 3.68 \\
\text{Anxiety} & 1.09 & 0.25 & 4.29 & 0.00 & 0.59 & 1.60 \\
\text{LHSATMS} & 0.75 & 0.43 & 1.75 & 0.08 & -0.10 & 1.60 \\
\text{LHSATNM} & 0.08 & 0.41 & 0.19 & 0.85 & -0.74 & 0.89 \\
\text{Gender} & 0.98 & 1.00 & 0.98 & 0.33 & -1.00 & 2.96 \\
\text{Age} & 0.39 & 0.33 & 1.19 & 0.24 & -0.26 & 1.04 \\
\text{EDU} & -0.41 & 0.48 & -0.86 & 0.39 & -3.57 & 3.54 \\
\end{array}
\]
Appendices

Test(s) of X by M interaction:

\[ F(\text{df}_0) \quad \text{df1} \quad \text{df2} \quad p \]
M1*X \quad .21 \quad 1.00 \quad 119.00 \quad .05
M2*X \quad 1.23 \quad 1.00 \quad 119.00 \quad .27

*************** TOTAL EFFECT MODEL ***********************

OUTCOME VARIABLE:

WTP_LH

Model Summary

\[ R \quad R^2 \quad \text{MSE} \quad F(\text{df}_0) \quad \text{df1} \quad \text{df2} \quad p \]
.50 \quad .25 \quad 24.02 \quad 11.46 \quad 4.00 \quad 122.00 \quad .00

Model

<table>
<thead>
<tr>
<th>coeff</th>
<th>se(\text{HC0})</th>
<th>t</th>
<th>p</th>
<th>LLCI</th>
<th>ULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>constant</td>
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<td>2.30</td>
<td>1.07</td>
<td>.29</td>
<td>-2.09</td>
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<tr>
<td>Anxiety</td>
<td>1.22</td>
<td>.26</td>
<td>4.71</td>
<td>.00</td>
<td>.71</td>
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<td>Gender</td>
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<td>.99</td>
<td>1.27</td>
<td>.20</td>
<td>-.70</td>
</tr>
<tr>
<td>Age</td>
<td>.33</td>
<td>.33</td>
<td>1.02</td>
<td>.31</td>
<td>-.31</td>
</tr>
<tr>
<td>EDU</td>
<td>-.32</td>
<td>.49</td>
<td>-.65</td>
<td>.52</td>
<td>-1.29</td>
</tr>
</tbody>
</table>

*************** TOTAL, DIRECT, AND INDIRECT EFFECTS OF X ON Y ***************

Total effect of X on Y

Effect | se(\text{HC0}) | t     | p     | LLCI | ULCI | c_ps | c_cs |
1.22   | .26           | 4.71  | .00   | .71  | 1.73 | .22  | .45  |

Direct effect of X on Y

Effect | se(\text{HC0}) | t     | p     | LLCI | ULCI | c_ps | c_cs |
1.09   | .25           | 4.29  | .00   | .59  | 1.60 | .20  | .41  |

Indirect effect(s) of X on Y:

<table>
<thead>
<tr>
<th>Effect</th>
<th>BootSE</th>
<th>BootLLCI</th>
<th>BootULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>.13</td>
<td>-.05</td>
<td>.32</td>
</tr>
<tr>
<td>LHSATMS</td>
<td>.13</td>
<td>-.03</td>
<td>.31</td>
</tr>
<tr>
<td>LHSATNM</td>
<td>.00</td>
<td>-.02</td>
<td>.05</td>
</tr>
</tbody>
</table>

Partially standardized indirect effect(s) of X on Y:

<table>
<thead>
<tr>
<th>Effect</th>
<th>BootSE</th>
<th>BootLLCI</th>
<th>BootULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>.02</td>
<td>-.01</td>
<td>.06</td>
</tr>
<tr>
<td>LHSATMS</td>
<td>.02</td>
<td>-.03</td>
<td>.06</td>
</tr>
<tr>
<td>LHSATNM</td>
<td>.00</td>
<td>-.02</td>
<td>.01</td>
</tr>
</tbody>
</table>

Completely standardized indirect effect(s) of X on Y:

<table>
<thead>
<tr>
<th>Effect</th>
<th>BootSE</th>
<th>BootLLCI</th>
<th>BootULCI</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOTAL</td>
<td>.05</td>
<td>-.02</td>
<td>.12</td>
</tr>
<tr>
<td>LHSATMS</td>
<td>.03</td>
<td>-.01</td>
<td>.12</td>
</tr>
<tr>
<td>LHSATNM</td>
<td>.01</td>
<td>-.02</td>
<td>.02</td>
</tr>
</tbody>
</table>

*************** ANALYSIS NOTES AND ERRORS ***************

Level of confidence for all confidence intervals in output:
95.0000

Number of bootstrap samples for percentile bootstrap confidence intervals:
5000

NOTE: A heteroscedasticity consistent standard error and covariance matrix estimator was used.

------- END MATRIX -------

Table 15: Mediation Analysis Results via PROCESS – Satisfaction on WTP Long-haul
Appendices

C2 Descriptive Analysis

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-haul SAT without MS</td>
<td>148</td>
<td>1</td>
<td>7</td>
<td>3.64</td>
<td>1.355</td>
</tr>
<tr>
<td>Short-haul SAT with MS</td>
<td>148</td>
<td>1</td>
<td>7</td>
<td>4.91</td>
<td>1.390</td>
</tr>
<tr>
<td>Long-haul SAT without MS</td>
<td>148</td>
<td>1</td>
<td>7</td>
<td>5.33</td>
<td>1.151</td>
</tr>
<tr>
<td>Long-haul SAT with MS</td>
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<td>2</td>
<td>7</td>
<td>5.92</td>
<td>1.079</td>
</tr>
<tr>
<td>Anxiety</td>
<td>148</td>
<td>1</td>
<td>7</td>
<td>2.52</td>
<td>2.098</td>
</tr>
<tr>
<td>Short-haul API would search for an airline with MS</td>
<td>148</td>
<td>1</td>
<td>5</td>
<td>3.47</td>
<td>1.145</td>
</tr>
<tr>
<td>Short-haul API considering an airline with MS as a first</td>
<td>148</td>
<td>1</td>
<td>7</td>
<td>2.88</td>
<td>1.765</td>
</tr>
<tr>
<td>Short-haul API would recommend airline offering MS</td>
<td>148</td>
<td>1</td>
<td>7</td>
<td>4.66</td>
<td>1.933</td>
</tr>
<tr>
<td>Long-haul API would search for an airline with MS</td>
<td>148</td>
<td>1</td>
<td>7</td>
<td>3.26</td>
<td>1.957</td>
</tr>
<tr>
<td>Long-haul API considering MS with MS as a first choice</td>
<td>148</td>
<td>1</td>
<td>7</td>
<td>3.32</td>
<td>1.859</td>
</tr>
<tr>
<td>Long-haul API would recommend airline offering MS</td>
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<td>1</td>
<td>7</td>
<td>4.92</td>
<td>1.839</td>
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<tr>
<td>Short-haul WTP</td>
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<td>18</td>
<td>3.61</td>
<td>3.630</td>
</tr>
<tr>
<td>Long-haul WTP</td>
<td>148</td>
<td>0</td>
<td>20</td>
<td>6.20</td>
<td>5.273</td>
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</table>

Table 16: Overall Descriptive Statistics

C3 Analysis of Paired Sample T-test Assumption – Normality of Differences

Hypothesis 1: Mindfulness Service on Satisfaction

Tests of Normality

<table>
<thead>
<tr>
<th>Kolmogorov-Smirnov</th>
<th>Statistic</th>
<th>df</th>
<th>Sig.</th>
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</thead>
<tbody>
<tr>
<td>SHSAT_DIF</td>
<td>.219</td>
<td>148</td>
<td>.000</td>
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<tr>
<td>LHSAT_DIF</td>
<td>.222</td>
<td>148</td>
<td>.000</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Shapiro-Wilk</th>
<th>Statistic</th>
<th>df</th>
<th>Sig.</th>
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</thead>
<tbody>
<tr>
<td>SHSAT_DIF</td>
<td>.902</td>
<td>148</td>
<td>.000</td>
</tr>
<tr>
<td>LHSAT_DIF</td>
<td>.857</td>
<td>148</td>
<td>.000</td>
</tr>
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</table>

a. Lilliefors Significance Correction

Table 17: Shapiro-Wilk – Difference of Satisfaction without Mindfulness and Satisfaction with Mindfulness Service for Short-haul & Long-haul

Figure 6 and Figure 7: Histogram & Boxplot – Difference of Satisfaction without Mindfulness and Satisfaction with Mindfulness Service Short-haul
Figure 8 and Figure 9: Histogram & Boxplot – Difference of Satisfaction without Mindfulness and Satisfaction with Mindfulness Service Long-haul

C4. Linear Regression Assumptions – Variable Screening

C4.1 Residual Plots

Hypothesis 2: Anxiety on SAT

Short-haul

Figure 10 and Figure 11: Residual Plot & Scatterplot – Anxiety on Satisfaction without Mindfulness Service Short-haul
Appendices

Figure 12 and Figure 13: Residual Plot & Scatterplot – Anxiety on Satisfaction with Mindfulness Service Short-haul

Long-haul

Figure 14 and Figure 15: Residual Plot & Scatterplot – Anxiety on Satisfaction without Mindfulness Service Long-haul

Figure 16 and Figure 17: Residual Plot & Scatterplot – Anxiety on Satisfaction with Mindfulness Service Long-haul
Hypothesis 3a: SAT on API

Figure 18 and Figure 19: Residual Plot & Scatterplot – Satisfaction on API Short-haul

Hypothesis 3b: SAT as a Mediator on Anxiety and API

Figure 22 and Figure 23: Residual Plot & Scatterplot – Anxiety and SAT on API Short-haul
Appendices

Figure 24 and Figure 25: Residual Plot & Scatterplot – Satisfaction on API Long-haul

**Hypothesis 4a: SAT on WTP**

Figure 26 and Figure 27: Residual Plot & Scatterplot – Satisfaction on WTP Short-haul
Appendices

**Hypothesis 4b: SAT as a Mediator on Anxiety and WTP**

Figure 28 and Figure 29: Residual Plot & Scatterplot – Satisfaction on WTP long-haul

Figure 30 and Figure 31: Residual Plot & Scatterplot – Satisfaction and Anxiety on WTP Short-haul

Figure 32 and Figure 33: Residual Plot & Scatterplot – Satisfaction and Anxiety on WTP Long-haul
C4.2 Normality Plots

SAT Short-haul

Figures 34 and Figure 35: Normality Plots – Satisfaction without Mindfulness Service vs. with Mindfulness Service Short-haul

SAT Long-haul

Figure 36 and Figure 37: Normality Plots – Satisfaction without Mindfulness Service vs. with Mindfulness Service Long-haul
Figure 38 and Figure 39: Normality Plots – Satisfaction with Mindfulness Service on API Short-haul & Long-haul

Figure 40 and Figure 41: Normality Plots – Satisfaction with MS and Anxiety on API Short-haul & Long-haul

Figure 42 Figure 43: Normality Plots – Satisfaction with Mindfulness Service on WTP Short-haul & Long-haul
Figure 44 Figure 45: Normality Plots – Satisfaction with MS and Anxiety on WTP Short-haul & Long-haul

C.4.3 Outliers

Figure 46: Residual Analysis – Outliers
C4.4 Normality Check

<table>
<thead>
<tr>
<th>Construct</th>
<th>Shapiro Wilk Test</th>
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<td>SHSATMS</td>
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Table 18: Normality Check for Raw Data

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<th>RAW DATA</th>
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Table 19: Normality Check for Raw Data
Table 20: Normality Check for Residuals

Table 21: Normality Check for Residuals
C4.5 Linearity Check

<table>
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<th>From</th>
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<th>Sign.</th>
<th>Linear</th>
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<tr>
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<tr>
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<td>LHSATNM</td>
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</tr>
<tr>
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<td>SIAPI</td>
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<td>LHAI</td>
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Table 22: Linearity Check

C4.6 Reliability and Validity Check

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</table>

Table 23: Reliability and Validity Check