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DECISION AIDS IN PATIENT-PHYSICIAN COMMUNICATION FOR SUPPORTING
SHARED DECISION MAKING AND PATIENT SATISFACTION: AN EXPERIMENTAL
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DECISION AIDS IN PATIENT-PHYSICIAN COMMUNICATION FOR SUPPORTING
SHARED DECISION MAKING AND PATIENT SATISFACTION: AN EXPERIMENTAL
STUDY

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TABLE OF CONTENTS

Abstract.....	vii
Chapter I: Introduction.....	1
Shared Decision Making and Patient Satisfaction in Psychiatry	2
The Role of Clinical Decision Aids	4
Purpose of the Study	6
Research Questions	7
Null Hypotheses.....	7
Alternative Hypotheses	8
Significance of the Study	8
Limitations	9
Delimitations	9
Assumptions.....	9
Operational Definitions.....	9
Chapter II: Literature Review.....	12
Introduction.....	12
Patient-Provider Communication.....	12
Shared Decision Making.....	14
Patient Satisfaction.....	16
Decision Aids in Relation to Shared Decision Making and Patient Satisfaction	16
Use and Style of Decision Aids	19
Chapter III: Methods	21
Research Design.....	21
Sample.....	21
Participant Recruitment	24
Experimental Conditions	25
Manipulation Check.....	25
Data Collection Procedures.....	26
Instrumentation	27
Shared Decision-Making Questionnaire (SDM-Q-9).	28
The Short Assessment of Patient Satisfaction (SAPS).	28
The Generalized Anxiety Disorder 7-item (GAD-7).	29

Demographics	30
Data Analysis	30
Chapter IV: Results	32
RQ1: Use of Decision Aids and Shared Decision Making	32
RQ2: Use of Decision Aids and Patient Satisfaction	32
RQ3: Decision Aids' Style and Shared Decision Making	33
RQ4: Decision Aids' Style and Patient Satisfaction	33
Sensitivity Analysis	34
Chapter V: Discussion	37
Recommendations for Future Research	43
Conclusions and Implications	43
References	45
Appendix A	53
Appendix B	58

“Medicine is an art whose magic and creative ability have long been recognized as residing in the interpersonal aspects of patient physician relationship.”

- Hall JA, Roter DL, Rand CS

Abstract

The aim of this study was to explore the effect of the use and style of decision aids on shared decision making and patient satisfaction in patient-physician communication in the context of Generalized Anxiety Disorder (GAD). An experimental study design was used. Participants were randomly assigned to three experiment conditions (i.e., no decision aid, narrative decision aid, and factual decision aid) to read conversations between a GAD patient and a psychiatrist. They were then asked to answer a range of questions that assessed their intention of involvement in shared decision making and satisfaction towards the patient-physician conversation. Data was collected using Qualtrics in the summer of 2022. Participants (N= 227) were adult residents of the United States and were predominately female (70.5%), White (51.5%), had a Bachelor's degree or higher (65.6%), and 69.2% currently lived in Oklahoma. Based on the Independent Sample T-Test, the use of decision aids resulted in significantly higher patient satisfaction compared to not using decision aids ($p < 0.05$). However, no significant differences were found between the use of decision aids and no decision aids on shared decision making ($p = .368$), decision aids' style on shared decision making ($p = .823$), and decision aids' style on patient satisfaction ($p = .068$). Findings from this study not only identify important tools that that may be used in patient-physician communication but also highlight the importance of incorporating decision aids regardless of style to improve patient outcomes, specifically patient satisfaction.

Keywords: decision aids, generalized anxiety disorder, shared decision making, patient satisfaction

Chapter I: Introduction

Psychiatry is a unique and sophisticated medical discipline. It is defined as the “field of medicine focused on the diagnosis, treatment, and prevention of mental, emotional, and behavioral disorders” (American Psychiatric Association, 2019). Psychiatrists aim to relieve symptoms of mental disorders and improve mental well-being. However, there remains an unmet need for proper mental health treatment that ensures humane care (Hanlon et al., 2008). Treating patients with psychiatric disorders has become mechanical, not humanely. Lakdawala (2015) suggests that patients are not treated with respect, and time spent with them is often rushed. The humane component of the patient is sometimes disregarded.

One important area of psychiatry is the treatment of anxiety disorders. Epidemiological studies of the prevalence and incidence of a variety of psychiatric disorders have been conducted globally contributing to the high prevalence of these disorders around the world (WHO, 2017). An estimated 264 million adults worldwide suffer from anxiety disorders (WHO, 2017). Anxiety disorders are the most common mental health disorder in the United States, affecting 40 million adults each year (Anxiety & Depression Association of America, 2021). They are defined as a “group of mental disorders characterized by feelings of anxiety and fear, including generalized anxiety disorder (GAD), panic disorder, phobias, social anxiety disorder, obsessive-compulsive disorder (OCD) and post-traumatic stress disorder (PTSD)” (WHO, 2017).

The most common anxiety disorder is Generalized Anxiety Disorder (GAD), affecting 6.8 million adults in the US yearly (Anxiety & Depression Association of America, 2021). GAD is defined as a “persistent feeling of anxiety or dread, which can interfere with daily life” (National Institute of Mental Health). Symptoms include restlessness, fatigue, impaired concentration, irritability, difficulty with sleeping, and excessive feelings of worry that are hard

to control (National Institute of Mental Health). Other than distinctive symptoms of GAD, GAD may cause significant functional and cognitive impairment, as well as a reduction in health-related quality of life (Ramos-García et al., 2021). Psychological and pharmacological interventions are among the evidence-based treatments for GAD (Ramos-García et al., 2021).

Although there is a cure for GAD, only 43.2% of patients who suffer from it seek help or get treated (Anxiety & Depression Association of America, 2021). Treatment can be very effective in mitigating symptoms of the disease allowing patients who live with GAD to have social and meaningful lives (Anxiety & Depression Association of America, 2021). Contrarily, untreated GAD has many negative consequences. People with untreated GAD may avoid social situations, and in more severe cases find it difficult to perform simple daily activities (Anxiety & Depression Association of America, 2021). Whilst treatments exist for this disorder, it is often misdiagnosed and undertreated (Davidson et al., 2010). The uncertainty of the patient-physician relationship is a stressor for many people with anxiety disorders, and it can cause them to become even more anxious. All patients' concerns about being genuinely understood, receiving an accurate diagnosis, and receiving effective treatment in a way that is sensitive to his or her specific needs are amplified for the patient presenting with an anxiety disorder (Stubbe, 2017).

Individuals suffering from anxiety disorders may need extra encouragement to express their opinions and concerns about treatment plans (Stubbe, 2017). When more time is spent on really engaging in a discussion about preferences, fears, hopes, and priorities, patients are more likely to adherence to the discussed treatment plan (Stubbe, 2017). Thus, examining components that marks effective patient-physician communication is pivotal in psychiatry.

Shared Decision Making and Patient Satisfaction in Psychiatry

Existing studies have shown the need for shared decision making (SDM) in the treatment of GAD (Ramos-García et al., 2021). SDM is a patient centered approach where the patient and doctor both have a say in the best treatment plan for the patient (Wieringa et al., 2017). Shared decision making is advocated as the gold standard of physician patient interaction in clinical care (Perestelo-Pérez et al., 2020). It is essential in all fields of medicine. However, it plays an especially important role in psychiatry (Priebe et al., 2011). When someone suffers from a psychiatric disorder, their perception of reality may be distorted as patients report having a hard time distinguishing between their own thoughts and those of the outside world (McCabe & Healey, 2018). Patients who suffer from psychiatric disorders like GAD often experience heightened anxiety and uncontrollable worry which leads to decreased awareness of their symptoms and impaired decision making (Teng et al., 2016). Concerns have been raised about people with GAD's ability to make treatment decisions (Teng et al., 2016). However, a diagnosis of GAD does not automatically imply that the person is unable to make decisions. In order to provide optimal care, one must understand these patients' needs. There is evidence that people with GAD are interested in and capable of participating in decision-making (Ramos-García et al., 2021). Thus, it is important to find ways to help them participate in shared decision making (Tasma et al., 2018).

Striving for optimal care is a top priority for healthcare organizations. How satisfied patients are with the care they receive influences clinical health outcomes, medication adherence, and patient retention (Prakash, 2010). A high level of satisfaction among patients receiving mental health services increases participation in treatment and promotes recovery (Fortin et al., 2018). One study found that patients are typically satisfied with mental health services when they receive good continuity of care and well-managed services in respect to their needs (Fortin et al.,

2018). However, patient satisfaction with psychiatric services is challenging (Holikatti, 2012). According to research, patients with mental disorders such as GAD have noted that the quality of care they receive is suboptimal resulting in lower levels of patient satisfaction (Stein et al., 2011). Thus, it is essential to identify ways to improve patient satisfaction in communication with psychiatrist, in order to further enhance treatment outcomes. Exceeding patients' expectations to provide a positive healthcare experience is highly important in clinical care.

The Role of Clinical Decision Aids

One way to improve shared decision making in treatment decisions and patient satisfaction in healthcare is by using tools that facilitate patient-physician communication. Clinical decision aids (CDAs) are defined as “evidence-based tools to support decision making in healthcare” and have been increasingly popular in multiple medical specialties (Tasma et al., 2018, p. 2). CDAs can provide patients information on treatment options, risks and benefits, effectiveness rates, and encourage evidence-based decision making (Tasma et al., 2018). They come in many forms including web-based aids, videos, and printed materials. Their use in mental healthcare is fairly new (Tasma et al., 2018).

To the best to the author's knowledge, there is no study on decision aids as facilitators of decision making in patients with GAD. However, decision aids have been studied in other areas, such as in patients with cardiovascular, chronic respiratory diseases, and diabetes. Various decision aids including videos and educational pamphlets have been found to facilitate SDM among these patients (Wieringa et al., 2017). Findings from a study about prosthetic heart valve selection in patients with cardiovascular disease reported that decision aids optimized decision making among these patients by better informing them of their treatment options and reducing anxiety prior to surgery (Korteland et al., 2017). Another study found that a paper based decision

aid that included treatment options and treatment intensities led to shared decision making in patients with type 2 diabetes (Den Ouden et al., 2017). Overall, decision aids have been shown to be potentially important tools for shared decision making in patients with chronic conditions, however, there remains a need to explore the use of decision aids in GAD, highlighting the need to study this gap in literature.

Apart from facilitating decision making, appropriate decision aids can potentially increase patient satisfaction, although evidence in research is lacking. Health-related information can be presented in a number of ways, but not all may be effective. High quality decision aids have been shown to increase satisfaction with information in cancer treatment (Yilmaz et al., 2020). This can lead to enhanced comprehension, which in turn allows the patient to make informed decisions. More engagement in healthcare decisions has been associated with higher patient satisfaction (Alston et al., 2014). However, there is less data, less assurance of a certain outcome, and less clarity as to which outcome is ideal when assessing treatment options in mental health care. (Substance Abuse and Mental Health Services Administration, 2010). Given that there are not many decision aids available in mental health care to assist patients in mental health decisions and little is known how about their role in patient-physician communication, this study can help address this gap in literature (Substance Abuse and Mental Health Services Administration, 2010).

Although every medical discipline intends to use effective and compassionate communication, the field of psychiatry requires a unique approach. Communication is especially critical for patients suffering from mental disorders. Psychiatrists, in particular, require certain language, communication, and empathy skills in order to communicate effectively with some of the most difficult patients (Loman, 2017). The presence and absence of decision aids may or may

not influence shared decision making and patient satisfaction in GAD patients, which this study aims to answer. Decision aids come in many forms (web-based, printed), have different modalities (audiovisual, textual) and varying narration styles (factual, narrative). This study looks at narration style within decision aids. Patient narratives are defined as “stories, testimonials, or anecdotes that provide illustrative examples of the experiences of others that are relevant to the decision at hand” (Shaffer et al., 2021, p. 897-898). Factual style is the use of factual or textual information in decision aids (Yılmaz et al., 2020). Narrative decision aids have been recommended for improving processing and use of cancer risk information in patients (Yılmaz et al., 2020). Narrative decision aids can help patients because they convey emotional and social information that factual decision aids may lack. Prior studies have explored the effect of factual versus narrative decision aids (Yılmaz et al., 2020; Shaffer et al., 2021). In comparison to a factual style, processing health related risk information has not significantly improved with the use of narrative decision aids in cancer patients (Yılmaz et al., 2020). The use of patient narratives could enhance decision aids, but the recommendation for narratives has not been supported in literature as a crucial component in decision aids (Shaffer et al., 2021). It is unclear whether narration style within decision aids enhances their effectiveness to allow patients to participate in shared decision making.

Purpose of the Study

Further research is merited to better understand the effect of the use and style of decision aids (i.e., no decision aid, factual decision aid, and narrative decision aid) on shared decision making in GAD patients. There is no consensus whether narrative decision aids are better than factual decision aids in general health care. The extent to which decision aids support shared decision making in mental health care remains unknown. Few, if any, studies have explored the

effect of the use and style of decision aids on patient satisfaction (Charles, et al, 1999). This study aimed to address the gaps in the literature by examining the relationship between the usage and types of decision aids on shared decision making and patient satisfaction in the context of GAD.

Research Questions

This study explored the following research questions:

RQ1: Does shared decision making differ when using decision aids versus not using decision aids in patient-physician communication in the context of GAD?

RQ2: Does patient satisfaction differ when using decision aids versus not using decision aids in patient-physician communication in the context of GAD?

RQ3: Does shared decision making differ when using narrative and factual decision aids in patient-physician communication in the context of GAD?

RQ4: Does patient satisfaction differ when using narrative and factual decision aids in patient-physician communication in the context of GAD?

Null Hypotheses

H₀₁: Shared decision making will not differ when using decision aids versus not using decision aids in patient-physician communication in the context of GAD.

H₀₂: Patient satisfaction will not differ when using decision aids versus not using decision aids in patient-physician communication in the context of GAD.

H₀₃: Shared decision making will not differ when using narrative and factual decision aids in patient-physician communication in the context of GAD.

H₀₄: Patient satisfaction will not differ when using narrative and factual decision aids in patient-physician communication in the context of GAD.

Alternative Hypotheses

H_{A1}: Shared decision making will differ when using decision aids versus not using decision aids in patient-physician communication in the context of GAD.

H_{A2}: Patient satisfaction will differ when using decision aids versus not using decision aids in patient-physician communication in the context of GAD.

H_{A3}: Shared decision making will differ when using narrative and factual decision aids in patient-physician communication in the context of GAD.

H_{A4}: Patient satisfaction will differ when using narrative and factual decision aids in patient-physician communication in the context of GAD.

Significance of the Study

Anxiety disorders are extremely prevalent and debilitating with GAD being the most common among them (Anxiety & Depression Association of America, 2021). According to the World Health Organization, the global prevalence of anxiety and depression increased by a staggering 25% in the beginning of the pandemic (WHO, 2022). The rise of psychiatric disorders is a component that needs an effective solution. There is a need to study GAD given the detrimental consequences of the disorder including interference with one's ability to perform daily tasks and poor quality of life. Current literature explains the importance of decision aids on shared decision making in general medicine (Wieringa et al., 2017). However, the effect of decision aids on shared decision making has not been consistently demonstrated in psychiatric disorders. There have been mixed findings on the use of electronic decision aids to support shared decision making in mental disorders (Tasma et al., 2018; Van der Krieke et al., 2013). The current study will help address the knowledge gap in existing literature and could contribute

more information in regards to the relationship between decision aids, shared decision making, and patient satisfaction in GAD.

Limitations

There are going to be several limitations for this study. The study will focus on GAD only and will not explore other anxiety disorders. Data will be collected using an experimental study design. This study will not recruit patients with GAD but rather include any adult in the US to respond to hypothetical scenarios of patient-physician communications with GAD patients. Furthermore, experimental research consists of hypothetical situations and may not accurately portray real life situations.

Delimitations

Delimitations include participant recruitment in the United States and being 18 or older.

Assumptions

The following was assumed in the current study:

- Participants had online and internet access to read the hypothetical situations and complete the survey
- Participants answered all survey questions honestly and to the best of their ability
- Participants understood the survey questions and did not misinterpret them

Operational Definitions

Patient-provider communication: Shared and mutually understood exchange of information between a patient and their provider (Patient Provider Communication Network, 2022)

Clinical decision aids (CDAs): Evidence-based tools to support decision making in healthcare (Tasma et al., 2018)

Narrative decision aids: Stories, testimonials, or anecdotes that provide illustrative examples of the experiences of others that are relevant to the decision at hand (Shaffer et al., 2021)

Factual decision aids: The use of factual or textual information in decision aids (Yılmaz et al., 2020)

Shared decision making (SDM): The process in which clinicians and patients work together to make decisions; key component in patient-centered healthcare (National Patient Advocate Foundation)

Patient Satisfaction: A subjective measure of whether a patient's expectations about a health encounter were met (Agency for Healthcare Research and Quality)

Mental health: A state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community (WHO, 2018)

Mental illness: Health conditions involving changes in emotion, thinking or behavior (or a combination of these); associated with distress and/or problems functioning in social, work or family activities (American Psychiatric Association)

Psychiatry: Field of medicine focused on the diagnosis, treatment, and prevention of mental, emotional, and behavioral disorders (American Psychiatric Association)

Anxiety Disorders: Group of mental disorders characterized by feelings of anxiety and fear, including generalized anxiety disorder (GAD), panic disorder, phobias, social anxiety disorder, obsessive-compulsive disorder (OCD) and post-traumatic stress disorder (PTSD) (WHO, 2017)

Generalized Anxiety Disorder (GAD): Persistent feeling of anxiety or dread, which can interfere with daily life (National Institute of Mental Health)

Chapter II: Literature Review

Introduction

Existing literature has shown the importance of patient-physician interaction using decision aids to facilitate shared decision making and improve patient satisfaction. This chapter explores the literature of the following topics: patient-provider communication, shared decision making, patient satisfaction, and decision aids, and the relationships among them.

Patient-Provider Communication

Patient-provider communication is an integral component to excellent, competent patient care. It is defined as the mutually understood and shared exchange of information between a patient and their provider (Patient Provider Communication Network, 2022). Effective patient-physician communication is a critical clinical function in establishing a therapeutic doctor-patient relationship, which is at the heart of medicine (Ha & Longnecker, 2010). This is critical in providing high-quality health care. Many patient complaints and dissatisfaction stem from a breakdown in the doctor-patient relationship (Ha & Longnecker, 2010).

The ability of physicians to communicate information effectively and compassionately is critical to the success of the physician-patient relationship (effective patient-physician communication). The overarching goal of medical communication is to improve a patient's health and medical care (Duffy et al., 2004). The three main goals of current patient-physician communication are to foster a positive interpersonal relationship, facilitate information exchange, and involve patients in decision making (Ha & Longnecker, 2010).

The success of patient outcomes is dependent on effective communication. Good patient-physician communication has the ability to help patients regulate their emotions, understand medical information more easily, and better identify their needs, perceptions, and expectations.

Patients who report having good communication with their doctors are more likely to be satisfied with their care, especially when it comes to sharing relevant information for accurate diagnosis of their conditions, following recommendations, and adhering to the prescribed treatment (Ha & Longnecker, 2010). More than 30 years of medical research has revealed that some aspects of physician patient communication including focusing on patient's issues and patient involvement in decision making can have a good impact on the patient's physical health as well as their psychological health, treatment adherence, and treatment satisfaction (Priebe et al., 2011).

Research has shown that communication is important in all medical specialties, but it is especially important in psychiatry (Priebe et al., 2011). It is more important in psychiatry than in other specialties for diagnosing disorders and delivering therapeutic interventions (Priebe et al., 2011). The importance of the physician-patient relationship in engaging patients in psychiatric treatments and facilitating positive outcomes has been repeatedly emphasized (Priebe et al., 2011; McCabe & Priebe 2004). Communication in psychiatry is important because various mental disorders affect how patients communicate (Priebe et al., 2011).

A study on patient-physician communication in mental health treatment found that patient empowerment and patient activation increased after implementation of the Right Question Project–Mental Health (RQP-MH) intervention (Cortes et al., 2009). Patients were taught how to ask questions as part of this intervention, which increased their involvement in mental health treatment decisions. Question formulation and decision-making skills have been shown to be critical for patients in order for them to make informed health decisions (Cortes et al., 2009). This information is relevant to the current study, which seeks to investigate how patient-physician communication may impact outcomes including shared decision making and patient satisfaction.

Shared Decision Making

The importance of shared decision making (SDM) is widely recognized internationally, and it is widely supported (Slade, 2017). Shared decision making has been defined by four characteristics: (1) At the very least, both the doctor and the patient are involved in the treatment decision-making process (2) Both the physician and the patient exchange information (3) By expressing treatment preferences, both the physician and the patient take measures to participate in the decision-making process (4) A treatment decision is made, and both the physician and the patient agree on the course of action to be taken (Charles et al, 1999). Shared decision-making (SDM) is currently regarded as the gold standard for interactions between patients and healthcare providers, both ethically and practically (Perestelo-Pérez et al., 2020).

There is a broad and growing consensus that patients should be fully involved in decision making (Slade, 2017). It is argued that SDM results in better outcomes, such as greater help-seeking behavior, increased decision-compliance, fewer errors, reduced stigma, and increased involvement (Slade, 2017). The basic justification for SDM is that clinicians are experts in diagnosis, etiology, prognosis, treatment options, and outcome probability, whereas patients are experts in sickness experience, social conditions, risk attitudes, values, and preferences (Slade, 2017).

SDM is widely recommended in mental health care (Slade, 2017). According to multiple studies, many mental health patients desire to be involved in decisions regarding their care (Fisher et al., 2018; Tlach et al., 2015). A study on patients with depression found that shared decision making was linked to improved patient satisfaction (Swanson et al, 2007). Numerous treatment guidelines in psychiatry have recommended shared decision making for the treatment

of patients with GAD (Ramos-García et al., 2021). There is also evidence that patients with GAD are interested in being involved in treatment decisions (Ramos-García et al., 2021).

Patients with mental disorders often struggle to communicate their needs, have a diminished awareness of their symptoms, and only have a hazy understanding of the various treatment options available to them (Tasma et al., 2018). As a result, psychological, medical, and social issues frequently go unnoticed or untreated. It is difficult to keep track of these patients' symptoms and unmet care needs in order to provide the best possible treatment, especially when they have variable needs across multiple domains (Tasma et al., 2018). Involvement in treatment decision making is especially important for these patients to improve mental health outcomes.

“To be a human person is to deal in meanings,” says Hinshelwood (1999, p. 187). Making sense of one's experiences is a fundamental human activity that is essentially social (McCabe & Healey, 2018). When someone suffers from a mental disorder, the boundaries between the self and the outside world can be especially perilous, as patients report difficulty distinguishing between their own ideas/thoughts and those emanating from the external environment (McCabe & Healey, 2018). The meaning of patients' symptoms is frequently disputed by clinicians and patients, with patients experiencing them as real and clinicians attributing them to a psychiatric illness, leaving patients feeling misunderstood (McCabe & Healey, 2018).

Understanding the meaning of unusual experiences may be especially important for people whose illnesses make them vulnerable to losing personal meaning (McCabe & Healey, 2018). In an attempt to better relate to and understand mental health patients' experiences, one should involve them in decisions about their care. To provide optimal care for GAD patients, it is important to give value to interventions to promote SDM. This study aimed to expand on this

idea by exploring tools to facilitate shared decision making among these patients. Additionally, a commonly used measure of quality healthcare is patient satisfaction, eliciting a need to study it as an outcome variable, which is explained in the next section.

Patient Satisfaction

The majority of the literature frequently uses patient satisfaction and adherence to assess the effectiveness of the doctor-patient relationship (Ha & Longnecker, 2010). Patient satisfaction is a key measure of healthcare quality (Prakash, 2010). In acute illness, patient satisfaction is a powerful predictor of treatment adherence and medical results (Ha & Longnecker, 2010). Patients are demanding more control over their healthcare in the aftermath of patient-centered healthcare, and they expect a certain level of service from their providers.

Patient satisfaction with psychiatric services is difficult to measure and is affected by a number of factors (Holikatti, 2012). The highest levels of satisfaction have been seen in areas of treatment planning/design, treatment accomplishment, and relationship with staff (Holikatti, 2012). Recent findings have explored the effect of satisfaction on the quality of life of patients diagnosed with GAD (Mei et al., 2021). Findings indicate that satisfaction is linked with quality of life (Mei et al., 2021). This is especially important for patients with GAD, as quality of life is an important component in their recovery.

Decision Aids in Relation to Shared Decision Making and Patient Satisfaction

One important technique used to facilitate patient-physician communication is decision aids. Decision aids are one of the most common interventions used to facilitate SDM between healthcare professionals and patients (Perestelo-Pérez et al., 2020). Clinical decision aids (CDAs) are defined as “evidence-based tools to support decision making in healthcare” (Tasma et al., 2018 p. 2). According to a recent meta-analysis, CDAs improve patients’ understanding of

potential treatment options, facilitate correct risk perception, and increase their active participation in the decision-making process (Stacey et al., 2017). They are available in a variety of formats: web-based aids, videos, booklets and other printed materials, software (Perestelo-Pérez et al., 2020). They can provide patients evidence-based information on disease information and treatment options available. Risks and benefits of various treatment options are also included in decision aids. Decision aids strive to encourage patients to think about their own values and choices in relation to potential medication side effects, whether explicitly or implicitly (Perestelo-Pérez et al., 2020). Decision aids can be used before a clinical encounter to prepare patients to express their worries and preferences about the treatment options, or during the clinical encounter (Perestelo-Pérez et al., 2020).

Findings across a few studies in patients with chronic conditions identified that the use of decision aids facilitated shared decision making in patients with cardiovascular disease and type 2 diabetes (Korteland et al., 2017; Den Ouden et al., 2017). A recent systematic review found that those exposed to decision aids felt more knowledgeable and informed, and likely to participate in decision making as opposed to not being exposed (Stacey et al., 2017). Another systematic review (O'Connor et al., 1999) that looked at the impact of decision aids on patient outcomes found that compared with simpler decision aids, more complex decision aids reduced decisional conflict and increased knowledge. Overall, evidence suggests decision aids may positively impact shared decision making in patient-physician communication in a wide range of medical conditions, such as breast cancer, prostate cancer, ischemic heart disease and asthma disease (O'Connor et al., 1999; Stacey et al., 2017). However, no research to date has examined this relationship in GAD patients. A recent study looked at the acceptability of a decision aid for patients with GAD and found it to be accepted by patients (Vanesa et al., 2022). The decision aid

included GAD treatment options (Vanesa et al., 2022). While the current study does not examine treatment options in decision aids, it goes beyond decision aid acceptability by examining the effectiveness of decision aids in the context of GAD. Another study evaluated patient's information and decision-making needs among patients with GAD (Ramos-García et al., 2021). This study aimed to assess patients' preferences of their ability to participate in treatment decisions, their information needs about GAD, and to investigate the relationship between involvement and their perceived difficulty of past GAD treatment decisions, the frequency of searching GAD-related material on the internet, and information needs (Ramos-García et al., 2021). The study used a cross-sectional survey study design among seventy Spanish adults who were currently or previously diagnosed with GAD (Ramos-García et al., 2021). Findings revealed that a significant number of GAD patients have unmet needs in terms of decision-making participation and information. This suggests that finding effective ways to offer information on treatment options is important among GAD patients, one area decision aids can be really helpful.

While decision aids improve patient's knowledge of treatment options and encourage them to take initiative in decision making, how they influence patient satisfaction remains unclear. As stated above, decision aids can positively impact shared decision making (O'Connor et al., 1999; Stacey et al., 2017), which is known to be positively associated with patient satisfaction (Mei et al., 2021). However, a review examining the role of decision aids on patient outcomes found that decision aids had almost no effect on satisfaction (O'Connor et al., 1999). In a more recent review (Stacey et al., 2017), mixed findings were reported such that decision aids was positively associated with patient satisfaction with the treatment choice and information provided, but no relationship with satisfaction with the decision and information about

medicines. Overall, the relationship between decision aids and patient satisfaction is inconclusive and calls for further investigation.

Use and Style of Decision Aids

The effect of decision aids' style has been studied in various medical disciplines (Yılmaz et al., 2020; Shaffer et al., 2021). Two main styles have been studied: narration style and factual style. Narrative decision aids are stories, testimonies, or anecdotes that provide instructive instances of other people's experiences that are relevant to the choice being made (Shaffer et al., 2021). The use of factual information in decision aids, for example, facts about a certain disease, is referred to as the factual narration style (Yılmaz et al., 2020). According to recent research, presenting health-related information in a narration style decision aids can improve processing and use of cancer risk information (Yılmaz et al., 2020). Patients can benefit from narratives because they convey emotional and social information that is sometimes lacking in factual knowledge (Yılmaz et al., 2020). The main theoretical justification for incorporating narratives into decision aids are to engage the audience and convey information about the patient experience (Shaffer et al., 2021). When compared to factual information, there is evidence in the broader literature on narratives that they may meet both of these purposes (Shaffer et al., 2021).

However, one study illustrated that the use of narrative decision aids in cancer patients has not resulted in significant improvements in the processing of health-related risk information (Yılmaz et al., 2020). Another study assessed the evidence for only using patient narratives in decision aids compared to didactic information (Shaffer et al., 2021). Findings from this study indicated that although the inclusion of patient narratives may be effective in improving patient adherence and increasing knowledge, the proposal for narratives as a critical component in decision aids has not been supported due to evidence for narratives not having an effect on

patient attitudes, behavior, or other psychological constructs (Shaffer et al., 2021). Overall, there are mixed findings about effectiveness of using narrative decision aids in facilitating patient doctor communication and how narrative decision aids compare to presenting factual information remain unclear.

Chapter III: Methods

This study aimed to address the gaps in literature by testing the effect of usage and types of decision aids on shared decision making and patient satisfaction in patient-physician communication in the context of GAD. A random sample of adults participated in an experiment study online. This chapter contains an overview of the study sample, sampling approach, inclusion criteria, instrumentation, research design, recruitment process, data collection procedures, and data analysis.

Research Design

This study used an experimental study design. The experimental conditions assessed the use and style of decision aids (i.e., no decision aid, factual decision aid, and narrative decision aid) in patient-physician communication. After completing an informed consent form, participants were randomly assigned to read one of the three conditions and then complete a survey to report their intention to be involved in shared decision making and patient satisfaction toward the interaction with the physician as if they were the patient in the conversation. The chosen research design is a suitable fit to explore the relationship between these two variables because of its ability to link cause and effect through treatment manipulation and it is efficient, requiring less testing time per participant (Bhattacharjee, 2012). This method is particularly useful when participants' time is limited and incredibly valued. This research design aimed to be realistic by mimicking a real-life dialogue between a psychiatrist and patient with GAD.

Sample

This study used convenience sampling as its sampling approach. Any adult (18 years or older) currently residing in the United States was eligible to participate in this study. Participants (n = 227) included 60 (26.4%) male, 160 (70.5%) female, 2 (0.9%) transgender, and 5 (2.2%)

nonbinary. The average age of participants was 30 years old ($SD = 11.55$). Participants were a mixture of race/ethnicity groups reflecting diversity, including 117 (51.5%) White, 41 (18.1%) Middle Eastern, 15 (6.6%) Hispanic or Latino/a, 15 (6.6%) Asian or Pacific Islander, 14 (6.2%) American Indian, Alaskan Native, or Native Hawaiian, 9 (4%) Black, 10 (4.4%) Biracial or Multiracial, and 6 (2.6%) “other.” Participants’ other demographics also differed, including education, marital status, and employment status (see details in Table 1).

A total of 401 potential participants attempted the experiment. Of these, 120 participants did not complete the survey until the end leaving 281 participants. Not all participants ($n = 54$) recognized the correct condition they were in based on their answers to the manipulation questions (details provided in a later section), and therefore were omitted from the sample. This resulted in a total of 227 participants, who recognized the correct condition they were in and were included in the final sample. The final sample consisted of 67 in the no decision aid condition, 83 in the narrative decision aid condition, and 77 in the factual decision aid condition.

Among these participants, 63 reported having been diagnosed with GAD (answered yes to the question “have you ever been diagnosed with GAD?”). Of these, 22 received no decision aid, 20 received a narrative decision aid, and 21 received a factual decision aid. 57 have been treated for GAD (answered yes to the question “have you ever been treated for GAD?”). Based on the Generalized Anxiety Disorder 7-item (GAD-7) scale, 98 participants [no decision aid (29), narrative decision (31), factual decision aid (38)] had GAD scores reported in GAD patients and 129 participants [no decision aid (38), narrative decision (52), factual decision aid (39)] did not have GAD scores reported in GAD patients. The GAD-7 scale is explained in a further section.

Table 1. Participant Characteristics

Demographics	Total (N = 227) <i>M (SD)</i> or <i>n (%)</i>
Age, in years (<i>M, SD</i>)	30.0 (11.55)
Gender (<i>n, %</i>)	
Female	160 (70.5%)
Male	60 (26.4%)
Transgender	2 (0.9%)
Nonbinary	5 (2.2%)
Race (<i>n, %</i>)	
White	117 (51.5%)
Middle Eastern	41 (18.1%)
Black or African American	9 (4%)
Hispanic or Latino/a	15 (6.6%)
Asian or Pacific Islander	15 (6.6%)
American Indian, Alaskan Native, or Native Hawaiian	14 (6.2%)
Biracial or Multiracial	10 (4.4%)
Other	6 (2.6%)
Education (<i>n, %</i>)	
Graduate or Professional Degree (Master's, PhD, JD, MD)	67 (29.5%)
Bachelor's Degree	82 (36.1%)
Associate Degree	17 (7.5%)
Some College no Degree	48 (21.1%)
High School Diploma or Equivalent	13 (5.7%)
Employment (<i>n, %</i>)	
Full-Time	88 (38.8%)
Part-Time	32 (14.1%)
Self employed	6 (2.6%)
Out of work for 1 year or more	3 (1.3%)
Out of work for less than 1 year	6 (2.6%)
Homemaker	6 (2.6%)
Student	86 (37.9%)
Marital Status (<i>n, %</i>)	
Single	121 (53.3%)
Married/Partnered	96 (42.3%)
Separated	2 (0.9%)
Divorced	7 (3.1%)
Other (Engaged)	1 (0.4%)
State of Residence (<i>n, %</i>)	
Oklahoma	157 (69.2%)
Other	69 (30.4%)

Note. *M* = mean, *SD* = standard deviation, *n* = number of participants, % = percentage of participants

The sample size for this study was pre-determined using a power analysis using G*Power software. Based on the power analysis for the independent sample T test analysis, a total sample size was calculated. Using the following parameters: .5 effect size, .05 α err prob, and .80 power, the power analysis calculated a sample size of 64 per group which yielded a total sample size of 192 to account for 3 groups. The final sample size of 227 exceeded the required total sample size. The sample size per group was also greater than the required: no decision aid (67), narrative decision (83), and factual decision aid (77).

Participant Recruitment

Participants for this study were recruited at one point in time. A variety of recruitment methods were utilized in this study. The recruitment lasted for 2 weeks from June 6, 2022 to June 20, 2022. The majority of participants (221) accessed the survey via the anonymous survey link and the rest (6) accessed the survey via the QR code.

Text-message recruitment: The researcher reached out to people via text messaging. A text message was sent out to the researcher's known contacts who met the study inclusion criteria. Additionally, a text-message was sent out to various group messages the researcher was in. The message included a brief study description with a weblink/QR code to access the study. The researcher's phone was readily available to answer any questions participants may have had.

Email recruitment: An email containing a brief description and weblink to the study was sent by OU's mass e-mass system (OUMM). The researcher's advisor sent out a mass email to all students enrolled at the University of Oklahoma in early June (June 7), one week later on June 16, another recruitment email was sent to remind potential participants to take part. Researcher contact information was provided on the email if participants needed additional information or had any questions about the study.

Social media recruitment: A social media post with information about the study including researcher's contact information was posted to Facebook, Instagram, and Twitter. Additionally, if a social media support group granted permission for social media recruitment, a post was distributed there. A weblink and QR code was included in the post for easy access to the study.

Flyer recruitment: A flyer containing a brief description of the study, a weblink and QR code, and researcher's contact information was posted in various places at the University of Oklahoma, Norman campus where dense student traffic is observed, including the Health and Exercise Science Department, Dale Hall, and Bizzell Memorial Library.

Experimental Conditions

The experimental conditions included three hypothetical scenarios of patient-physician communication. In all three conditions, an interaction between a GAD patient and a psychiatrist was shown where the patient presents with GAD symptoms and the psychiatrist shows empathy and understanding while assuring the patient that what they have is not a heart condition although they firmly believe it is, but rather a form of anxiety. One condition included no decision aid. Another included a narrative decision aid. The last condition included a factual decision aid. Please see Appendix B for the complete scenarios including the decision aids.

Manipulation Check

A range of manipulation check questions were asked to assess whether or not the independent variables (i.e., use and style of decision aids) were modified in the expected manner. Three questions were asked of participants to see if they accurately recognized the condition they were in. To assess manipulation of decision aid absence, participants were asked "In the scenario you read above, did the psychiatrist present additional materials beyond the conversation?" To assess manipulation of a narrative decision aid, participants were asked, "In the scenario you

read above, did the psychiatrist present a GAD recovery story?” To assess manipulation of a factual decision aid, participants were asked “In the scenario you read above, did the psychiatrist present a fact sheet about anxiety attacks?” Participants answered “yes” or “no” to each question. To determine the effectiveness of each condition, all manipulation questions were asked in all three conditions.

The first manipulation check question (seeing additional materials) did not work properly. Participants seemed to be confused about what was considered additional materials. Some of those that didn’t receive a narrative or factual decision aid answered yes to seeing additional materials and some of those that did receive a narrative or factual decision aid answered no to seeing additional materials. Thus, answers to this manipulation question were eliminated and the other two manipulation questions were used to judge manipulation success. Manipulation was considered successful if participants answered no to both seeing a story and seeing a fact sheet for the no decision aid condition, answered yes to seeing a story and no to seeing a fact sheet for the narrative decision aid condition, and answered yes to seeing a fact sheet and no to seeing a story for the factual decision aid condition.

Data Collection Procedures

Participant recruitment and data collection took place in the summer of 2022. Before data collection took place, the Institutional Review Board (IRB) at the University of Oklahoma, Norman campus reviewed and approved the study procedure. This experiment was administered using Qualtrics. Participants chose to participate by their own will and participated on their own time. Participation occurred on any computer or mobile device that had internet access. Prior to beginning the experiment participation, participants were required to consent. This was done by reading the informed consent form that describes the study purpose and procedure and choosing

“agree” at the end. Participants who answered yes to both screening questions (i.e., age and living in the U.S.) proceeded to the experiment conditions. They were randomly assigned by the system to read one of the three conditions. Immediately after reading the assigned conditions, they were asked manipulation check questions then completed a survey regarding what they anticipated will happen in regard to decision-making and patient satisfaction in the consultation. Following data collection, participants’ responses were recorded in the Qualtrics software and imported into SPSS for data analysis.

Instrumentation

The study was administered electronically through Qualtrics, a secure online survey tool. The first section of the survey included an informed consent form which included a brief description of the study, confidentiality information, length of completion, and voluntary nature of the study. The second section consisted of screening questions. The third section was the experiment conditions followed by a range of manipulation check questions which are questions that directly test whether or not the independent variable was manipulated in the intended manner. The last section consisted of questions relating to participant’s satisfaction, shared decision making, and demographic information. The survey instruments that were used in the online survey are summarized in Table 2.

Table 2. Summary of Survey Scales and Items

Scale/Item	Variable/Purpose	Number of Items
SDM-Q-9	Shared Decision Making	9
SAPS	Patient Satisfaction	7
GAD-7	Anxiety Symptoms	7
Demographics	Participant Demographics	12

Note. SDM-Q-9 = Shared Decision-Making Questionnaire; SAPS = The Short Assessment of Patient Satisfaction; GAD-7 = Generalized Anxiety Disorder 7-item

Shared Decision-Making Questionnaire (SDM-Q-9). The Shared Decision-Making questionnaire was chosen to assess one of the dependent variables of the study – shared decision making. It is a 9-item measurement that assesses important characteristics of shared decision making in clinical settings. It was designed using a theory-based approach and was developed for use in both research and clinical practice (Kriston et al., 2010). Respondents answer items about the degree of involvement in decision making using a 6-point Likert scale (0=completely disagree; 5=completely agree). This instrument wording of the questions has been revised to reflect participant's expectations about decision making in the consultation to fit the current study. A sample item from the scale states, "I expect my doctor to want to know exactly from me how I want to be involved in making the decision." Items were summed to yield a total score ranging between 0 to 45. In previous studies, the scale yielded a Cronbach's alpha of .94 indicating a high internal consistency of the instrument. (Kriston et al., 2010). The SDM-Q-9 has been validated and well accepted in a primary care sample of patients (Kriston et al., 2010). The Cronbach's alpha of the scale in the present study was .86.

The Short Assessment of Patient Satisfaction (SAPS). The Short Assessment of Patient Satisfaction was used to assess patient satisfaction, the second dependent variable of this study. The SAPS is a short and easy to use scale that takes patients less than a minute to complete. It includes 7 items that address treatment satisfaction, explanation of treatment findings, clinician care, engagement in medical decision making, respect by the clinician, time with the clinician, and satisfaction with hospital/clinic care. Respondents answer a range of items with different response formats about patient satisfaction. The order of the answers varies depending on the question. This scale has been revised to demonstrate how participant's feel about the medical care they anticipate receiving. A sample item from the scale states, "How satisfied do you expect

to be with the explanations the psychiatrist has given you about the results of your {treatment/care}?” with response options that range from very dissatisfied (0) to very satisfied (4). Another example item states, “The psychiatrist is expected to be very careful to check everything when examining you.” with response options that range from strongly agree (0) to strongly disagree (4). Following instruction of the index, final scores were obtained by reversing the scores for items 1, 3, 5, 7 and then summing all scores for a possible total score ranging from 0 (extremely dissatisfied) to 28 (extremely satisfied) (Centre for Health Service Development). Studies that have utilized the SAPS have shown acceptable internal consistency, with a Cronbach’s alpha of .86 (Hawthorne et al., 2014). The Cronbach’s alpha in the present study was .79.

The Generalized Anxiety Disorder 7-item (GAD-7). The Generalized Anxiety Disorder 7-item (GAD-7) is a 7-item questionnaire that is used as an initial screening tool for generalized anxiety disorder. Respondents answer items about anxiety symptoms using a 4-point Likert scale (0=not at all; 3=nearly every day). A sample item from the scale states, “Over the last 2 weeks, how often have you been bothered by the following problems: feeling nervous, anxious or on edge?” with response options that range from (0) not at all to (3) nearly every day. GAD-7 scores were obtained by summing the scores for each question for a total possible score ranging from 0 (minimal anxiety) to 21 (severe anxiety). A score of 8 or higher is a suitable cut-off for GAD (Plummer et al., 2016). Using an 8-point cut-off, the GAD-7 has a sensitivity of 92% and a specificity of 76% for diagnosing GAD (Plummer et al., 2016). Previous studies have shown the scale yielded an excellent internal consistency, with a Cronbach’s alpha of .94 (Spitzer et al., 2006). The GAD-7 has been validated to be an efficient tool for screening for GAD (Spitzer et al., 2006). The Cronbach’s alpha of the scale in the present study was .92.

Demographics. This survey included nine items about age, gender, race, highest educational attainment, current job status, occupation, marital status, and state of residence to examine common demographic factors among participants. Since the study recruited adults to assess hypothetical scenarios of patient-physician communication with GAD patients, it is important to gather participant background information regarding GAD. Participants answered questions about whether they had been diagnosed with GAD, been treated for the disorder, and how satisfied they were with the medical care they received.

Data Analysis

A statistical analysis computer software, SPSS, was used to perform several tests. First, descriptive statistics were reported including the mean, standard deviation (for continuous variables), frequencies and percentages (for categorical variables), for the variables being studied (primary and demographic).

Two Independent Sample T-Tests were performed to explore how using or not using decision aids affects shared decision making (RQ1) and patient satisfaction (RQ2), respectively. Narrative and factual decision aid groups were combined to represent the group of using decision aids, to be compared with the no decision aid group. Another two Independent Sample T-Tests were used to determine if shared decision making (RQ3) and patient satisfaction (RQ4) differed between the two conditions when narrative versus factual decision aids were used. Table 3 summarizes and outlines statistical analyses by research question. The p value, otherwise known as the significance level was reported to determine if there is a significant correlation between our variables. All data analysis was conducted using a priori significant value of 0.05.

Table 3. Summary of Data Analysis Procedures by Research Question

Research Question	Data Analysis Procedures	Variable(s)
RQ 1: Does shared decision making differ when using decision aids versus not using decision aids in patient-physician communication in the context of GAD?	Independent Sample T-Test	SDM-Q-9
RQ 2: Does patient satisfaction differ when using decision aids versus not using decision aids in patient-physician communication in the context of GAD?	Independent Sample T-Test	SAPS
RQ 3: Does shared decision making differ when using narrative and factual decision aids in patient-physician communication in the context of GAD?	Independent Sample T-Test	SDMQ-9
RQ 4: Does patient satisfaction differ when using narrative and factual decision aids in patient-physician communication in the context of GAD?	Independent Sample T-Test	SAPS

Note. SDM-Q-9 = Shared Decision-Making Questionnaire; SAPS = The Short Assessment of Patient Satisfaction.

Additionally, a sensitivity analysis was conducted to see whether the results of participants with GAD (GAD-7 score ≥ 8) are comparable to the results of participants without GAD (GAD-7 score < 8) based on the GAD-7. Two new datasets were created to account for each group using the “select cases” function on SPSS. Using the two new datasets, a series of independent sample t-tests were performed for each research question.

Chapter IV: Results

A series of independent sample t-tests were conducted to test hypotheses 1-4 and sensitivity analyses were conducted to check if the results differed between participants with GAD symptoms and participants without GAD symptoms. This chapter includes a summary of the results by research question as well as the results from a sensitivity analysis.

RQ1: Use of Decision Aids and Shared Decision Making

For RQ1, as shown in Table 1, no significant differences were observed between the use of decision aids ($M = 38.65$, $SD = 5.67$) and no decision aids ($M = 37.89$, $SD = 5.92$) in influencing shared decision making, $t(225) = -.902$, $p = .368$. These results did not support H_{A1} , as significant group differences were not identified for shared decision making between the use of decision aids and no decision aids. Thus, we accept the null hypothesis (H_{01}).

RQ2: Use of Decision Aids and Patient Satisfaction

For RQ2, as shown in Table 1, significant differences were found between the use of decision aids and no decision aids in influencing patient satisfaction, $t(225) = -2.361$, $p < 0.05$. Those who were given a decision aid ($M = 20.76$, $SD = 3.88$) reported higher levels of patient satisfaction than those who were not given a decision aid ($M = 19.38$, $SD = 4.31$). These results supported H_{A2} , as patient satisfaction differed between the use of decision aids and no decision aids. Therefore, we reject the null hypothesis (H_{02}).

Table 1. Results of Independent Sample T-Test on the Use of Decision Aids

DV	IV	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>
Shared Decision Making	No Decision Aid	67	37.89	5.92	-.902, <i>p</i> = .368
	Decision Aid	160	38.65	5.67	
Patient Satisfaction	No Decision Aid	67	19.38	4.31	-2.361*
	Decision Aid	160	20.76	3.88	

Note. DV = Dependent Variables; IV = Independent Variables

Note. * $p < .05$

RQ3: Decision Aids' Style and Shared Decision Making

For RQ3, as shown in Table 2, no significant differences were identified for narrative ($M = 38.74$, $SD = 6.31$) and factual decision aids ($M = 38.54$, $SD = 4.92$) in influencing shared decision making, $t(158) = .224$, $p = .823$. These results did not support H_{A3} , as no significant differences in shared decision making were observed when narrative and factual decision aids were presented. Therefore, we accept the null hypothesis (H_{03}).

RQ4: Decision Aids' Style and Patient Satisfaction

For RQ4, as shown in Table 2, no significant differences were observed for narrative ($M = 20.22$, $SD = 4.07$) and factual decision aids ($M = 21.35$, $SD = 3.61$) in influencing patient satisfaction, $t(158) = -1.837$, $p = .068$. These results did not support H_{A4} , as no significant differences in patient satisfaction were observed when narrative and factual decision aids were presented. Thus, we accept the null hypothesis (H_{04}).

Table 2. Results of Independent Sample T-Test on Decision Aid Style

DV	IV	<i>n</i>	<i>M</i>	<i>SD</i>	<i>t</i>
Shared Decision Making	Narrative Decision Aid	83	38.74	6.31	.224, <i>p</i> =.823
	Factual Decision Aid	77	38.54	4.92	
Patient Satisfaction	Narrative Decision Aid	83	20.22	4.07	-1.837, <i>p</i> =.068
	Factual Decision Aid	77	21.35	3.61	

Note. DV = Dependent Variables; IV = Independent Variables

Sensitivity Analysis

A sensitivity analysis was conducted to see if participants who had GAD symptoms would respond to the experiment differently than those who did not have GAD symptoms according to the GAD-7. Using participants' responses to the GAD-7, two subgroups of participants were created. The GAD-7 is a reliable and effective tool for diagnosing GAD and determining the extent of the disorder in clinical practice and research (Spitzer et al., 2006). A score of 8 or higher is a reasonable cut-off point for identifying likely cases of GAD (Plummer et al., 2016). The results are presented below.

Participants with GAD symptoms. Participants who had a GAD score of 8 or greater (*n* = 98) were included in this group. Of these, 29 received no decision aid, 31 received a narrative decision aid, and 38 received a factual decision aid.

For RQ1, no significant differences were found between the use of decision aids (*M* = 38.20, *SD* = 6.40) and no decision aids (*M* = 36.72, *SD* = 7.47) in influencing shared decision making, *t* (96) = -.992, *p* = .324. For RQ2, significant group differences were identified, *t* (96) =

-2.232, $p < 0.05$. The use of decision aids ($M = 20.63$, $SD = 3.69$) indicated higher levels of patient satisfaction than not using decision aids ($M = 18.79$, $SD = 3.83$).

For RQ3, shared decision making did not differ between narrative decision aids ($M = 37.19$, $SD = 7.96$) and factual decision aids ($M = 39.02$, $SD = 4.73$), $t(67) = -1.186$, $p = .240$. For RQ4, no significant differences were identified for narrative ($M = 19.77$, $SD = 3.50$) and factual decision aids ($M = 21.34$, $SD = 3.73$) in influencing patient satisfaction, $t(67) = -1.782$, $p = .079$.

Participants without GAD symptoms. Participants who had a GAD score of 7 or less ($n = 129$) were included in this group. Of these, 38 received no decision aid, 52 received a narrative decision aid, and 39 received a factual decision aid.

For RQ1, no significant differences were identified for the use of decision aids ($M = 38.98$, $SD = 5.06$) and no decision aids ($M = 38.78$, $SD = 4.28$) in influencing shared decision making, $t(127) = -.213$, $p = .832$. For RQ2, patient satisfaction did not differ between the use of decision aids ($M = 20.86$, $SD = 4.04$) and no decision aids ($M = 19.84$, $SD = 4.65$), $t(127) = -1.256$, $p = .212$.

For RQ3, no significant differences were found between narrative decision aids ($M = 39.67$, $SD = 4.94$) and factual decision aids ($M = 38.07$, $SD = 5.13$) in influencing shared decision making, $t(89) = 1.499$, $p = .138$. For RQ4, patient satisfaction did not differ between narrative decision aids ($M = 20.50$, $SD = 4.38$) and factual decision aids ($M = 21.35$, $SD = 3.54$), $t(89) = -1.003$, $p = .319$.

All in all, the results from both groups slightly differed. No significant differences were identified for RQ1, RQ3, and RQ4 across both groups. RQ2, however, yielded different results for each group. Participants with GAD symptoms indicated higher levels of patient satisfaction when using decision aids as opposed to not using decision aids. On the other hand, patient

satisfaction did not differ between the use of decision and no decision aids in participants without GAD symptoms. Since there were a few discrepancies between participants with GAD symptoms and participants without GAD symptoms, the results should be interpreted cautiously and may or may not apply to the entire sample.

Chapter V: Discussion

Despite extensive literature on decision aids, shared decision making, and patient satisfaction, there remains limited research on how these three variables are related in patient-physician communication. This study investigated the relationship between the usage and types of decision aids on shared decision making and patient satisfaction in patient-physician communication in the context of GAD. Overall, this study discovered significant relationships between decision aid use and patient satisfaction. This chapter includes a discussion of the results, limitations, recommendation for future research, and conclusions and implications.

RQ1: Use of Decision Aids and Shared Decision Making

Although decision aids have been known to be one of the most common tools to facilitate shared decision making in clinical settings, it was surprising to find that shared decision making was not significantly affected by decision aid use, which is inconsistent with previous study findings (Korteland et al., 2017; Den Ouden et al., 2017). However, it was interesting to see that participants in the decision aid group ($M = 38.65$, $SD = 5.67$) indicated higher levels of shared decision making than those in the no decision aid group ($M = 37.89$, $SD = 5.92$). This difference, although not significant, is worth noting since the direction is as expected – the mean value of the decision aid group is higher ($M = 38.65$) than the no decision aid group ($M = 37.89$).

One possible explanation for the non-significant finding is that the current sample size contributed to a lack of statistical power. The pre-determined sample size may have not been sufficient to detect the effect. The power analysis conducted assumed a medium effect size of 0.5. The required sample size would have had to be much larger if the true effect size was smaller than 0.5. For example, a total sample size of 788 (394 per group for 2 groups) would have been required for a small effect size of 0.2 and a total sample size of 352 (176 per group for

2 groups) for a 0.3 effect size. Another possible explanation may have been because of the content of the decision aids. The decision aids were used to help participants understand what GAD is emphasizing that it is not a heart condition whether presented through a story or a fact sheet. Treatment options for GAD were not included in the decision aids, which is a critical component to make decisions about a given treatment. Hence, the results may have been different if the content of the decision aids were about treatment options. Overall, the non-significant findings in this study do not necessarily mean the use of decision aids have no impact on shared decision making given the reasons stated above, future research is needed to further test this relationship.

RQ2: Use of Decision Aids and Patient Satisfaction

Results reveal that there are significant differences between the use of decision aids and no decision aids in influencing patient satisfaction. Also, since the mean of the decision aid condition ($M = 20.76$, $SD = 3.88$) is greater than that of the no decision aid condition ($M = 19.38$, $SD = 4.31$), it can be concluded that the use of decision aids is effective in influencing patient satisfaction. In the current study, the average SAPS score was 20.36 ($SD = 4.06$) for all participants. Previous studies that utilized the SAPS had similar SAPS mean scores (Hawthorne et al., 2014; Sansoni et al., 2011). In a study about patients receiving incontinence treatment, the average patient satisfaction score was 21.91 ($SD = 5.29$) (Hawthorne et al., 2014). Another study found the SAPS mean score for incontinence patients was 21.96 ($SD = 4.85$) (Sansoni et al., 2011). These scores are close to the patient satisfaction mean score found in this study indicating that satisfaction is comparable to real life situations. A score between 19 and 26 on the SAPS scale indicates that the patient was very satisfied or satisfied on four or more SAPS items (Centre for Health Service Development). This suggests participants were generally satisfied with the

patient-physician conversation presented in the experiment conditions (Centre for Health Service Development). Prior research has suggested that the use of decision aids is positively associated with patient satisfaction in a wide range of medical conditions, including ischemic heart disease, prostate cancer, and asthma (Stacey et al., 2017). Mental health disorders like GAD were not among these conditions. This makes the current study novel because it looks at the context of GAD while other studies look at physical health conditions, not mental health conditions. The current study went beyond physical health conditions focusing on GAD and contributes to literature by suggesting that decision aids influence patient satisfaction in the context of GAD making decision aids acceptable for GAD patients. These study findings provide a new insight into the relationship between the use of decision aids and patient satisfaction, specifically in the context of GAD.

It should be noted that there were also other studies indicating the use of decision aids not being associated with patient satisfaction in physical health conditions (O'Connor et al., 1999), which contradicts the current study findings. One possible reason is the studies reported in O'Connor et al. (1999) looked at patient satisfaction with decision making specifically, while this study looked at overall patient satisfaction, including satisfaction with treatment, explanation of treatment findings, clinician care, engagement in medical decision making, respect by the clinician, time with the clinician, and satisfaction with hospital/clinic care. It is important to distinguish the target of patient satisfaction in future research because participants could feel differently about the process (e.g., whether the interaction was friendly) and outcome (e.g., whether the treatment was optimal) of patient-physician communication.

Additionally, the use of decision aids significantly affected patient satisfaction in the GAD symptoms sample but not in the non-GAD symptoms sample as shown in the sensitivity

analysis. Specifically, participants with GAD symptoms who used a decision aid reported higher levels of patient satisfaction than their non decision aid use counterparts. It should be noted in the sensitivity analysis, the sample size for participants with GAD symptoms was very small (29 for the no decision aid group and 69 for the decision aid group). The fact the results were statistically significant with such a small sample size indicates a decent effect size of decision aid on patient satisfaction, suggesting the use of decision aids are particularly important for patients with GAD symptoms. On the other hand, no significant results were identified in the sample without GAD symptoms. A possible explanation may be due to relatability of the conditions. Participants without GAD symptoms may have not interpreted the scenarios correctly or have not been able to understand a mental disorder they do not present with. Another possible explanation for this may be due to GAD patients' preexisting knowledge. Participants with GAD may already know the facts behind what is happening during an anxiety attack. However, they may appreciate decision aids as they serve as additional tools beyond the conversation in the medical consultation resulting in higher patient satisfaction. Future research should measure satisfaction toward the information presented in the decision aid as well as satisfaction towards the physician's knowledge. Overall, the study results indicate decision aids may be helpful in improving patients' satisfaction during a clinical encounter, especially for patients with GAD symptoms.

RQ3: Decision Aids' Style and Shared Decision Making

No significant differences were found between narrative decision aids and factual decision aids in influencing shared decision making in the context of GAD. Although the difference was not statistically significant, it was interesting to see that the shared decision making score was higher in the narrative decision aid group ($M = 38.74$, $SD = 6.31$) when

compared to the factual decision aid group ($M = 38.54$, $SD = 4.92$), which is in a direction that is consistent with previous literature (Yılmaz et al., 2020).

The non-significant results may be because the narrative decision aid was lacking critical story components or not accurately portraying real story effects. Another possible explanation may have been because the narrative decision aid contained more information than the factual decision aid due to the nature of stories. This might have led to processing information differently, resulting in no differences between narrative and factual decision aids. Additionally, participants' cultural background may affect their preferences regarding decision aid style. While story telling is important in all cultures, some cultures may utilize it more than others. Some participants may enjoy obtaining information through stories while others just want the facts. Since patient narratives was not shown to be effective in influencing shared decision making in the current study, there is a need for additional research on decision aids' style in influencing shared decision making in the context of GAD.

RQ4: Decision Aids' Style and Patient Satisfaction

No significant differences between narrative decision aids and factual decision aids were found in influencing patient satisfaction in the context of GAD. It was surprising to see that factual decision aids ($M = 21.35$, $SD = 3.61$) preceded narrative decision aids ($M = 20.22$, $SD = 4.07$) in terms of patient satisfaction mean value, contradicting to previous research (Yılmaz et al., 2020). A possible explanation for this may be due to clarity of information in the decision aid. If participants thought that GAD was not well explained in the story or fact sheet or that the decision aid was not clear, they may have responded differently. Future research should consider examining process measures (include questions on what participants thought of the decision aids), which could help explain how decision aids work or do not work. Additionally, participant

demographics varied widely, and certain participants may have needed some aspects of the decision aid to be clarified. Also, the sample was highly educated, including 36.1% with a bachelor's degree and 29.5% with a graduate or professional degree. Preferences for narrative or factual decision aids may differ among people with professional degrees as opposed to people with a lower level of education or health literacy.

As discussed in the results to RQ2, the use of decision aids was effective in influencing patient satisfaction. Thus, we can say that the use of decision aids demonstrates a positive effect on patient satisfaction, but decision aids' style does not. This further compels the need for more research on decision aids' style in influencing patient satisfaction in the context of GAD.

Limitations

Several limitations should be considered when evaluating the findings of this study. The gender distribution of the sample gender varied greatly: 160 females and 60 males (more than twofold difference). This study used convenience sampling to recruit adults in the US. Therefore, generalizations for other populations should not be drawn. Not everyone presented with GAD symptoms, and sensitivity analyses indicated there were differences between the participants with GAD symptoms vs. without, so the results should be interpreted with caution. Additionally, the illness context of the study was GAD and may not be representative of other anxiety disorders or other mental conditions. Participants with other anxiety disorders or have more than one type of anxiety disorder might respond to the experiment differently. The current study did not look at other health outcomes (e.g., improved knowledge) that may have been affected by the use of decision aids. For instance, participants may have become more knowledgeable by using decision aids, but not necessarily increase their shared decision making and patient satisfaction. The study design was experimental, and therefore consisted of hypothetical scenarios that may

not accurately represent real-world circumstances. Participants who go for a medical consultation might respond differently when presented with a decision aid, whereas the present study assessed participants who responded to an online hypothetical situation.

Recommendations for Future Research

This study used an experimental approach to understand the relationship between the usage and style of decision aids and shared decision making and patient satisfaction in patient-physician communication in the context of GAD. The study findings speak to the need for further research on improving patient outcomes in the context of GAD through the implementation of decision aids in clinical care. More research is needed on GAD because (1) there is limited research on the subject and (2) it can allow us to test the relationship multiple times for results to be replicated. Future research would also benefit from exploring this relationship in other mental and behavioral disorders to see if shared decision making and patient satisfaction differ in other medical conditions. It may be beneficial to look at other mental disorders because those who present with other disorders might respond differently due to the nature of the disorder. Also, including treatment options in decision aids might yield different results. Looking at different outcomes other than shared decision making and patient satisfaction may help explain decision aids' use and style even better. Furthermore, a qualitative research approach might be beneficial as it may provide a more nuanced understanding of how “real” patients appreciate decision aids during their medical encounters. Qualitative research provides valuable data because of real life interactions. It goes beyond answering closed survey questions and gives explanations on why participants answer the way they do.

Conclusions and Implications

Many people want to be active participants in their own healthcare. The current study provides a foundation for incorporating decision aids in patient-physician communication. The study findings indicate that decision aids can improve patient satisfaction in a medical consultation. It is important for physicians to use decision aids to positively influence patient satisfaction. Physicians should consider using a decision aid in patient-physician communication since these study findings show that it results in higher patient satisfaction. Although it is unclear whether narrative or factual decision aids are better, it is necessary to incorporate decision aids in clinical care irrespective of style.

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Appendix A

Survey Instrument

9-item Shared Decision Making Questionnaire (SDM-Q-9)

Section A: Imagine you are the patient in the conversation you read above. Nine statements related to the decision-making following the above mentioned consultation are listed below. For each statement please indicate how much you agree or disagree the situation described in the statement will likely to happen following the conversation you read.

0= completely disagree, 1 = strongly disagree, 2 = somewhat disagree, 3 = somewhat agree, 4 = strongly agree, 5 = completely agree

1. I expect my doctor to make clear to me that a decision needs to be made. 0 1 2 3 4 5
2. I expect my doctor to want to know exactly from me how I want to be involved in making the decision. 0 1 2 3 4 5
3. I expect my doctor to tell me that there are different options for treating my medical condition. 0 1 2 3 4 5
4. I expect my doctor to precisely explain the advantages and disadvantages of the treatment options to me. 0 1 2 3 4 5
5. I expect my doctor to help me understand all the information. 0 1 2 3 4 5
6. I expect my doctor to ask me which treatment option I prefer. 0 1 2 3 4 5
7. I expect my doctor and I to thoroughly weigh the different treatment options. 0 1 2 3 4 5
8. I expect my doctor and I to select a treatment option together. 0 1 2 3 4 5
9. I expect my doctor and I to reach an agreement on how to proceed. 0 1 2 3 4 5

The Short Assessment of Patient Satisfaction (SAPS)

Section B: Imagine you are the patient in the conversation you read above. These next questions are about how you feel about the medical care you anticipate to receive. The order of the answers varies between the questions. Mark how you expect to feel for each question.

1. How satisfied do you expect to be with the effect of your treatment/care?
Very satisfied (0) Satisfied (1) Neither satisfied nor dissatisfied (2) Dissatisfied (3)
Very dissatisfied (4)
2. How satisfied do you expect to be with the explanations the psychiatrist has given you about the results of your treatment/care?
Very dissatisfied (0) Dissatisfied (1) Neither satisfied nor dissatisfied (2) Satisfied (3)
Very satisfied (4)
3. The psychiatrist is expected to be very careful to check everything when examining you.
Strongly agree (0) Agree (1) Not sure (2) Disagree (3) Strongly disagree (4)
4. How satisfied do you expect to be with the choices you had in decisions affecting your health care?
Very dissatisfied (0) Dissatisfied (1) Neither satisfied nor dissatisfied (2) Satisfied (3)
Very satisfied (4)
5. How much of the time do you expect to feel respected by the psychiatrist in future consultations?
All of the time (0) Most of the time (1) About half the time (2) Some of the time (3)
None of the time (4)
6. The time you expected to have with the psychiatrist was too short.
Strongly agree (0) Agree (1) Not sure (2) Disagree (3) Strongly disagree (4)
7. How satisfied do you expect to be with the care you anticipated to receive?
Very satisfied (0) Satisfied (1) Neither satisfied nor dissatisfied (2) Dissatisfied (3)
Very dissatisfied (4)

The Generalized Anxiety Disorder 7-item (GAD-7)

Section C: Over the last 2 weeks, how often have you been bothered by the following problems?

0= not at all, +1= several days, +2= more than half the days, +3= nearly every day

1. Feeling nervous, anxious or on edge 0 1 2 3
2. Not being able to stop or control worrying 0 1 2 3
3. Worrying too much about different things 0 1 2 3
4. Trouble relaxing 0 1 2 3
5. Being so restless that it is hard to sit still 0 1 2 3
6. Becoming easily annoyed or irritable 0 1 2 3
7. Feeling afraid as if something awful might happen 0 1 2 3

1. Have you ever been diagnosed with Generalized Anxiety Disorder (GAD)?
 - ☐ Yes
 - ☐ No
2. (if answer is yes to Q1) Have you ever been treated for GAD?
 - ☐ Yes
 - ☐ No
3. (if answer is yes to Q2) How satisfied were you with the medical care you received?
 - ☐ Very satisfied
 - ☐ Satisfied
 - ☐ Neither satisfied nor dissatisfied
 - ☐ Dissatisfied
 - ☐ Very dissatisfied

Demographics

Section D: Choose the answer that best describes you.

1. What is your age? ____ years.
2. What is your gender?
 - ☐ Male
 - ☐ Female
 - ☐ Transgender
 - ☐ Other, please specify: _____.
3. How do you usually describe yourself? (Mark all that apply)
 - ☐ White
 - ☐ Black
 - ☐ Hispanic or Latino/a
 - ☐ Asian or Pacific Islander
 - ☐ American Indian, Alaskan Native, or Native Hawaiian
 - ☐ Biracial or Multiracial
 - ☐ Middle Eastern
 - ☐ Other, please specify: _____.
4. What is the highest level of school you have completed?
 - ☐ Less Than a High School Degree
 - ☐ High School diploma or Equivalent
 - ☐ Some College no Degree
 - ☐ Associate Degree
 - ☐ Bachelor's Degree

- Graduate or Professional Degree (Master's, PhD, JD, MD)
5. Are you currently...?
- Employed Full-Time
 - Employed Part-Time
 - Self-employed
 - Out of work for 1 year or more
 - Out of work for less than 1 year
 - A homemaker
 - A student
 - Unable to work
6. How many hours a week do you work for pay? _____ hours.
7. What is your marital status?
- Single
 - Married/Partnered
 - Separated
 - Divorced
 - Other, please specify: _____.
8. Which one of the following **best** describes your current job position or primary role?
- Administrator, Manager, or Director
 - Researcher
 - Dentist
 - Dental Hygienist
 - Environmental Health professional
 - Epidemiologist or Biostatistician
 - First Responder (EMT, paramedic, firefighter)
 - Health Educator/Trainer
 - Psychiatrist
 - Information Technology specialist
 - Laboratorian
 - Law Enforcement (police, state patrol, FBI, etc.)
 - Legal Professional (attorney, judicial)
 - Mental or Behavioral Health professional
 - Nurse (community or public health nurse)
 - Nurse (other RN, LPN, BSN, etc.)
 - Pharmacist
 - Physician

- ☐ Physician Associate
- ☐ Public Information, Media Relations, or Communications specialist
- ☐ Student
- ☐ Professor/Teacher
- ☐ Veterinarian
- ☐ Other, please specify: _____

9. Where do you currently reside?

- ☐ Oklahoma
- ☐ Other, please specify: _____

Appendix B

Experiment Conditions

Scenario 1: Absence of Decision Aid (Interaction between physician and patient)

Psychiatrist: Hi patient X. What led you to come in today?

Patient: My heart.

Psychiatrist: Tell me what has been going on.

Patient: I have rapid heart palpitations, sweating, and I easily get tired. I feel like I can't breathe sometimes.

Psychiatrist: Right.

Patient: I get chest pains, I worry I am going to have a heart attack and die.

Psychiatrist: I'm here to help. You're not going to die although it may feel that way sometimes. How are you feeling at the moment?

Patient: I feel like my heart is starting to pound just talking about it.

Psychiatrist: Take your time. So your heart begins to race, you break into a sweat, and you feel like it is difficult to breathe? Is that right?

Patient: Yes, that is exactly what happens.

Psychiatrist: Does this happen often?

Patient: Yeah

Psychiatrist: How long have you had symptoms like this?

Patient: Probably about 6 months

Psychiatrist: Okay. Do you remember what this stemmed from?

Patient: It all started during my first day at work.

Psychiatrist: Do you mind telling me what happened that day?

Patient: My heart was pounding in my chest, my palms were sweaty, I was hot, gasping for air... then I started to get chest pains. I had begun contemplating why I applied for the job. I felt more stressed about work than I normally do.

Psychiatrist: That sounds like a horrible experience for you.

Patient: It was frightening. I thought I was having a heart attack and I feel like that's what's happening every time I have one of these episodes.

Psychiatrist: Right. Ok

Patient: I find myself avoiding things that may cause that.

Psychiatrist: What type of things do you find yourself avoiding?

Patient: I tend to call off work a lot because of the crowded environment and oftentimes I have trouble focusing on the tasks at hand. I miss project deadlines due to workplace pressure. I make excuses not to hang out with my friends. I don't exercise or do anything that may put my heart rate up. I do not want to put any strain on my heart.

Psychiatrist: Okay, just so I have understood you correctly, this began about 6 months ago, stress related to work, these attacks have become frequent. It has got to the point where you are avoiding crowded places and not socializing like you used to.

Patient: Yeah. I still worry that something is wrong with my heart.

Psychiatrist: Well, I don't think there is anything wrong with your heart. Your vital signs are good. The lab results from your EKG came back normal. If there were something wrong like heart disease, the electrical changes in the heart would be picked up by the EKG.

Patient: I feel relieved hearing that.

Psychiatrist: It looks like you might have generalized anxiety disorder. There are multiple approaches for this condition. We can consider medicine or treatment. Both have advantages and disadvantages, which we would need to discuss in detail. Let us thoroughly examine some of the treatment options so that we can determine which one is best for you.

Patient: Okay. I still can't quite understand what is going on.

Psychiatrist: What you're having is not a heart condition, it is a form of anxiety. Anxiety is normal and will not harm you. You may mistake an anxiety attack for a heart attack because the symptoms can be very similar. Although an anxiety attack can mimic a heart attack, it can't kill you. GAD is highly treatable. With the right treatment you are on your road to recovery.

Patient: That is great. I would love to discuss the treatment options.

The conversation continued with the patient and the psychiatrist discussing treatment options.

Please click on “next” to proceed to the next page to answer a few questions about what you think of this conversation.

Scenario 2: Narrative decision aid (information describing experiences of a patient)

Psychiatrist: Hi patient X. What led you to come in today?

Patient: My heart.

Psychiatrist: Tell me what has been going on.

Patient: I have rapid heart palpitations, sweating, and I easily get tired. I feel like I can't breathe sometimes.

Psychiatrist: Right.

Patient: I get chest pains, I worry I am going to have a heart attack and die.

Psychiatrist: I'm here to help. You're not going to die although it may feel that way sometimes. How are you feeling at the moment?

Patient: I feel like my heart is starting to pound just talking about it.

Psychiatrist: Take your time. So your heart begins to race, you break into a sweat, and you feel like it is difficult to breathe? Is that right?

Patient: Yes, that is exactly what happens.

Psychiatrist: Does this happen often?

Patient: Yeah

Psychiatrist: How long have you had symptoms like this?

Patient: Probably about 6 months

Psychiatrist: Okay. Do you remember what this stemmed from?

Patient: It all started during my first day at work.

Psychiatrist: Do you mind telling me what happened that day?

Patient: My heart was pounding in my chest, my palms were sweaty, I was hot, gasping for air... then I started to get chest pains. I had begun contemplating why I applied for the job. I felt more stressed about work than I normally do.

Psychiatrist: That sounds like a horrible experience for you.

Patient: It was frightening. I thought I was having a heart attack and I feel like that's what's happening every time I have one of these episodes.

Psychiatrist: Right. Ok

Patient: I find myself avoiding things that may cause that.

Psychiatrist: What type of things do you find yourself avoiding?

Patient: I tend to call off work a lot because of the crowded environment and oftentimes I have trouble focusing on the tasks at hand. I miss project deadlines due to workplace pressure. I make excuses not to hang out with my friends. I don't exercise or do anything that may put my heart rate up. I do not want to put any strain on my heart.

Psychiatrist: Okay, just so I have understood you correctly, this began about 6 months ago, stress related to work, these attacks have become frequent. It has got to the point where you are avoiding crowded places and not socializing like you used to.

Patient: Yeah. I still worry that something is wrong with my heart.

Psychiatrist: Well, I don't think there is anything wrong with your heart. Your vital signs are good. The lab results from your EKG came back normal. If there were something wrong like heart disease, the electrical changes in the heart would be picked up by the EKG.

Patient: I feel relieved hearing that.

Psychiatrist: It looks like you might have generalized anxiety disorder. There are multiple approaches for this condition. We can consider medicine or treatment. Both have advantages and disadvantages, which we would need to discuss in detail. Let us thoroughly examine some of the treatment options so that we can determine which one is best for you.

Patient: Okay. I still can't quite understand what is going on.

Psychiatrist: You are not alone. Did I ever tell you about my daughter's remarkable story who struggled and triumphed over Generalized Anxiety Disorder (GAD)?

Patient: No

Psychiatrist: Would you like to read it?

Patient: Sure

(psychiatrist presents story)

Emma's GAD Recovery Story

Written by Bushra Salous



Emma was not aware that her mental illness was affecting her until she began working as an engineer. Going into work, she was constantly reminded that this was supposed to be her dream job although it felt far from it. Working has been a challenging time for her. The huge life transition, work responsibilities, and overwhelming pressure of "adulting" has taken a toll on her. She decided to see a psychiatrist to get the support she needed. She presented numerous times with complaints of heart palpitations and chest pains, which she attributed to a heart condition. Emma quickly understood that what she had was not a heart condition although she firmly believed it was. She learned that an anxiety attack is not a heart attack. She was able to receive a diagnosis of Generalized Anxiety Disorder and begin treatment. Being consistent with her medication made her realize that she was not existing, she was living. She was able to thrive with the treatment, not constantly worry about things, and do the things that she loved to do. Emma began appreciating her job and learned how to live life with GAD not through it.

Page 1

Patient: That is great. I would love to discuss the treatment options.

The conversation continued with the patient and the psychiatrist discussing treatment options.

Please click on “next” to proceed to the next page to answer a few questions about what you think of this conversation.

Scenario 3: Factual decision aid (information focused on the facts only)

Psychiatrist: Hi patient X. What led you to come in today?

Patient: My heart.

Psychiatrist: Tell me what has been going on.

Patient: I have rapid heart palpitations, sweating, and I easily get tired. I feel like I can't breathe sometimes.

Psychiatrist: Right.

Patient: I get chest pains, I worry I am going to have a heart attack and die.

Psychiatrist: I'm here to help. You're not going to die although it may feel that way sometimes. How are you feeling at the moment?

Patient: I feel like my heart is starting to pound just talking about it.

Psychiatrist: Take your time. So your heart begins to race, you break into a sweat, and you feel like it is difficult to breathe? Is that right?

Patient: Yes, that is exactly what happens.

Psychiatrist: Does this happen often?

Patient: Yeah

Psychiatrist: How long have you had symptoms like this?

Patient: Probably about 6 months

Psychiatrist: Okay. Do you remember what this stemmed from?

Patient: It all started during my first day at work.

Psychiatrist: Do you mind telling me what happened that day?

Patient: My heart was pounding in my chest, my palms were sweaty, I was hot, gasping for air... then I started to get chest pains. I had begun contemplating why I applied for the job. I felt more stressed about work than I normally do.

Psychiatrist: That sounds like a horrible experience for you.

Patient: It was frightening. I thought I was having a heart attack and I feel like that's what's happening every time I have one of these episodes.

Psychiatrist: Right. Ok

Patient: I find myself avoiding things that may cause that.

Psychiatrist: What type of things do you find yourself avoiding?

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Patient: Okay. I still can't quite understand what is going on.

Psychiatrist: Has anyone explained to you what happens to the body during an anxiety attack?

Patient: Not really, no

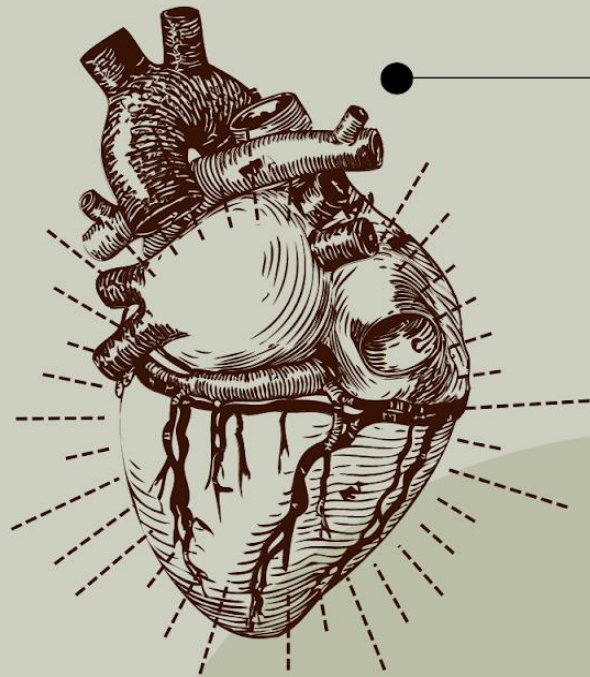
Psychiatrist: Let us look at the facts of what happens during an anxiety attack. As you can see shown in the fact sheet, symptoms of an anxiety attack may be very similar to a heart attack, but do not indicate a heart condition.

(psychiatrist presents fact sheet)

Anxiety Attack

What is really happening

01. During an anxiety attack, the body's "fight or flight" response is activated
02. This produces hormones called adrenaline which are dumped into the bloodstream
03. These hormones alter one's bodily state resulting in intense physical symptoms
04. Adrenaline causes one's breathing rate and heart rate to increase putting the body on high alert
05. This can result in chest pain, a racing heart, and tingling feelings in the hands. This unpleasant feeling eventually subsides
06. Symptoms of an anxiety attack can mimic a heart attack, but do not indicate a serious disease



Page 1

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