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Testing the Proposed Benefits of Integrated Care: Referral Compliance, Client Satisfaction, and Treatment Adherence

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Abstract

Testing the Proposed Benefits of Integrated Care: Referral Compliance, Client Satisfaction, and Treatment Adherence

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Over the past two decades, in an effort to narrow the gap between the fields of medicine and mental health, researchers have increasingly studied models of health care featuring varying degrees of collaboration between the two disciplines. Throughout the literature, models featuring higher degrees of collaboration between primary care providers (PCPs) and mental health providers (MHPs) are hypothesized as having a number of benefits (e.g., higher mental health referral compliance rates, higher client satisfaction, increased treatment adherence, etc.) over models that feature little-to-no collaboration between said providers. This paper encourages future research to put that notion to the test by pitting two models of health care – an 'integrated care' model (featuring high collaboration), and a 'traditional care' model (featuring low collaboration) – directly against one another. After reviewing some of the current problems with our nation's healthcare system, the history behind the biopsychosocial movement, and the

literature on various models of collaborative care, the author outlines a proposal for how future experimental studies could be developed focusing on three specific outcomes: referral compliance, client satisfaction, and treatment adherence. Research questions, hypotheses, and implications for the health care marketplace are discussed in detail.

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INTRODUCTION

"Primary care cannot be practiced without addressing mental health concerns,
and all attempts to do so result in inferior care."
~Frank V. deGruy

A Health Care Crisis

In fiscal year 2013, the federal government spent an estimated $3.685 trillion, amounting to 22.7 percent of the nation's Gross Domestic Product, or the total value of goods and services that a country produces each year (Office of Management and Budget, Table S-6). Two health insurance programs – Medicare and Medicaid – together accounted for 21 percent of the federal budget ($771 billion) in 2013, making government expenditure on health care services larger than those on military and defense ($651 billion). Social Security, which provides monthly benefits to retired workers, was the only item that spent a larger portion of the budget ($813 billion) that year (Table S-5). Despite unprecedented spending on health care, McDaniel and deGruy (2014) state "The health status of Americans and the quality of the health care services they receive fall short of acceptable" (p. 325). According to a recent report by Davis, Stremikis, Schoen, and Squires (2014), despite having the most expensive health care system in the world, the United States ranks last overall among 11 industrialized countries on measures of health system quality (e.g., effective care, safe care, coordination between providers), access to care (e.g., burden of costs, ability to see a provider quickly), efficiency (e.g., duplicative medical testing, administrative hassles), equity (e.g., receiving care when needed, treatment adherence), and healthy lives (e.g., infant mortality, life expectancy). In short, our nation's health care

system has plenty of room for improvement.

The U. S. health care system is one that is constantly in motion. According to Drum and Sekel (2012), this repeating change cycle "is the result of attempts at economic reform, on the part of both business and government, motivated by the desire to reduce health-care costs" (p. 558). Over time, changes made to the system have had an impact on the way health care services have been delivered, organized, and financed (Drum & Sekel, 2012). Historically, the dominant model for the explanation of health and disease, and organization of our nation's health care marketplace has been the biomedical model. Unfortunately, this model assumes a mind-body dualism which long ago resulted in the field of mental health largely being "carved out" of the U. S. health care enterprise (McDaniel & deGruy, 2014). As a result, the field of mental health is managed by a different system of care using different providers and resources. Consequently, "physical" and "mental" health professionals have been trained separately, with few opportunities to collaborate (McDaniel & DeGruy, 2014). It is for these reasons that the field of mental health is often considered "specialty care." As the health care system is not as robustly achieving its stated aims, it has become apparent that the biomedical model, and the artificial gap it has created in health care service delivery, is no longer adequate. While the system has led to numerous problems in both health disciplines, this article primarily focuses on those related to mental health.

Mental Health Conditions and Comorbidity

To begin, mental health conditions are common and are the leading cause of disability worldwide (World Health Organization [WHO], 2008). In 2012, an estimated 18.6% of adults in the United States – approximately 43.7 million Americans – had a mental illness (excluding developmental and substance use disorders) in the past year (Substance Abuse and Mental

Health Services Administration [SAMHSA], 2013). Making matters worse, comorbidity appears to be the rule rather than the exception with over 68% of adults with a mental disorder (diagnosed with a structured clinical interview) also having at least one medical condition (Alegria, Jackson, Kessler, & Takeuchi, 2003). In other words, the notion that people have just one disorder is not true. Speaking to this finding, the pathways leading to comorbidity of mental and medical disorders are complex and bidirectional (Katon, 2003). For instance, medical disorders may lead to mental illness, and mental health conditions may place an individual at elevated risk for medical disorders. To little surprise, co-occurring mental and medical disorders are associated with higher symptom burden, functional impairment, decreased quality and length of life, and increased health care costs (Druss & Walker, 2011).

Problems in Primary Care

One might expect that the majority of individuals with mental health concerns would seek help from a mental health provider (e.g., psychologist, psychiatrist, licensed professional counselor, licensed clinical social worker) first; however, this is not the norm as primary care settings tend to be the entry point for this population. Research indicates that patients with psychosocial and behavioral health needs are prevalent in primary care settings (Kroenke & Mangelsdorff, 1989) and that up to 70% of primary care visits are related to behavioral health needs (Fries, Koop, & Beadle, 1993). Within primary care settings, anxiety disorders are the most prevalent mental illnesses treated followed by substance abuse and mood disorders (Narrow, Rae, Robins, & Regier, 2002; Kessler et al., 1994). Research also shows that primary care providers (e.g., physicians, physician assistants, nurse practitioners) treat over half of all common mental health disorders (Bea & Tesar, 2002) and write nearly 80% of all prescriptions for psychotropic medications within the United States (Beardsley, Gardocki, Larson, & Hidalgo,

1988). According to Valleley et al. (2007), together, these findings suggest that primary care providers (PCPs) have increasingly become 'de facto mental health providers.' This is problematic for a number of reasons.

PCPs, although well trained in physical medicine, often lack the training or time to manage mental health problems in an optimal manner. With any illness, before a treatment plan can be created and/or implemented, the problem(s) must first be identified. When it comes to the domain of mental health, this appears to be a weakness of PCPs. Research indicates that one-half to two-thirds of patients meeting criteria for a diagnosable mental disorder go unrecognized within the primary care sector (deGruy, 1996). According to Munroe (2008), "Undiagnosed and untreated mental health disorders are associated with substantial disability, increased health care costs, and higher rates of medical utilization" (p. 10). Not all of the blame for these issues can or should be placed on PCPs however. When encountering patients with mental health concerns, PCPs often make outside referrals to mental health providers (MHPs). Unfortunately, numerous studies show that substantial portions of primary care patients do not comply with these referrals (deGruy, 1996; Hampton-Robb, Qualls, & Compton, 2003). Here, again, the blame can and should be placed on the health care system – a system that "perpetuates the dualistic provision of health care services" (Munroe, 2008, p. 1).

Together, these findings represent an enormous challenge for our nation's health care system -- one that must be tackled if we hope to meet the goals of the Institute for Healthcare Improvement's (IHI) Triple Aim: improve the health of populations, improve the quality of health care for individuals, and do these things less expensively (Berwick, Nolan, & Whittington, 2008). On a positive note, the passing of the Patient Protection and Affordable Care Act (PPACA) aims to expand coverage for mental health conditions and has led to profound changes

being made in the structure of the health care marketplace. Attempts to reduce health care costs and improve service quality has led researchers, clinicians, and policy makers to become increasingly interested in examining models of care that feature higher degrees of collaboration between primary care and mental health providers. Before describing the different models of collaborative care, it is important to see how the collaborative care movement gained momentum.

Two Influential Events

Researchers often designate two events as largely being responsible for creating the driving force behind the collaborative care movement. Interestingly enough, both of these events occurred in the late 1970s – the publication of George Engel's article in *Science* and the creation of Division 38 of the American Psychological Association (APA).

The Biopsychosocial Model

In his 1977 seminal article, "The Need for a New Medical Model: A Challenge for Biomedicine," Engel, an American psychiatrist, questioned the medical field's continued adherence to the biomedical model for explaining and treating disease. Engel describes some of his concern as to whether the contemporary model was, in fact, any longer adequate, in the following excerpt:

> I contend that all medicine is in crisis and, further, that medicine's crisis derives from the same basic fault as psychiatry's, namely, adherence to a model of disease no longer adequate for the scientific tasks and social responsibilities of either medicine or psychiatry.…Medicine's crisis stems from the logical influence that since 'disease' is defined in terms of somatic parameters, physicians need not be concerned with

psychosocial issues which lie outside of medicine's responsibility and authority. (p. 129)

In an effort to alleviate the 'crisis' brought on by the biomedical model – a model that "leaves no room within its framework for the social, psychological, and behavioral dimensions of illness" (p.130) – Engel proposed it be expanded to address all determinates of disease. He called this new approach the biopsychosocial model. Contrary to the biomedical model – which embraces the concept of mind-body dualism – the biopsychosocial model exemplifies a 'mind-body connection.' In a sense, the creation and popularization of this model provided a theoretical framework for which collaborative care could be established.

Health Psychology

Division 38 of the APA, Health Psychology, was added in 1978. The creation of this field was led by Joseph Matarazzo, an American clinical psychologist. In the 'President's Column' of the inaugural issue of *The Health Psychologist*, the division's newsletter, Matarazzo (1979) outlined the mandate of the field. The purposes of Division 38 were:

> (**a**) to advance contributions of psychology as a discipline to the understanding of health and illness through basic and clinical research and by encouraging the integration of biomedical information about health and illness with current psychological knowledge;
>
> (**b**) to promote education and services in the psychology of health and illness;
>
> and
>
> (**c**) to inform the psychological and biomedical community, and the general public, on the results of current research and service activities in this area. (p. 1)

In many ways, the presence of Engel's biopsychosocial model can already be felt in these words. Over 35 years later, Matarazzo's mandate has proven to be successful. Not only did

health psychologists play a crucial role in defining and launching the field of behavioral health, Munroe (2008) states that Division 38 has "moved psychology from being a *mental health* profession to a full partner in the *health* professions" (p. 22).

Although we now have a better sense as to what helped contribute to the development of the collaborative care movement, a better understanding as to what collaborative models of care consist of is necessary. The following section describes those models in detail.

What is Collaborative Care?

Navigating the collaborative care literature can be difficult. For instance, when describing the same things, medical providers often tend to use different vocabulary terms in articles compared to those written by mental health professionals. According to Hunter, Goodie, Oordt, and Dobmeyer (2009), "The terms *collaborative*, *coordinated*, *co-located*, *care management*, and *integrated* care are often used interchangeably and can lead to confusion regarding the type of service that is being delivered or evaluated" (p. 3). This section aims to reduce that confusion by providing operational definitions of the most important terms to know.

To begin, it is important to note that 'collaborative care' is not synonymous with 'integrated care.' Rather, it is helpful to view collaborative care as an umbrella term, with there existing varying degrees of collaboration between PCPs and MHPs underneath. Hunter, Goodie, Oordt, and Dobmeyer (2009) offer the following definition: "Collaborative care is not a fixed model or specific approach. It is a concept that emphasized opportunities to improve the accessibility and delivery of behavioral health services in primary care through interdisciplinary collaboration" (p. 3). Speaking to this, throughout the literature, models of collaborative care are conceptualized as falling on a continuum. At one end there is little or no collaboration between

PCPs and MHPs who share the same patient. At the opposite end of the continuum, the highest degree of collaboration exists. Researchers refer to this type of collaboration as integrated care. In other words, whereas a model of care may be collaborative but not integrated, an integrated model would always be considered collaborative.

Pertaining to one side of the collaborative care continuum, several authors have tried to define integrated care. According to Kelly and Coons (2012), "Integrated care is in marked contrast to the more traditional and often fragmented approach to patient care, where providers across the health disciplines operate on their own with consultative relationships" (p. 586). While insightful, this definition gives us a good idea of what integrated care is not. More descriptive information is necessary and desired. The Institute of Medicine (2001) defines integrated care as health care that is comprehensive, continuous, coordinated, culturally competent and consumer centered. While these definitions sound appealing and complement each other well, they remain fairly general and do not provide a detailed picture as to what integrated care actually looks like. The best way to understand what integrated care is and how it works is by examining different models of collaboration that researchers have developed over the past two decades. The following is a detailed description of the three most influential models.

The First Classification

Doherty, McDaniel, and Baird (1996) were the first to propose a model describing the levels of collaborative care. This model consists of five levels, with each succeeding level indicating an increase in the degree of collaboration between PCPs and MHPs and the integration of mental health services into primary care settings. At the first level is **minimal collaboration**. Here, PCPs and MHPs work in separate systems and facilities and rarely communicate about

cases. The authors mention that at this level, providers often have little appreciation for the culture of each other's discipline. One could say that this level represents the traditional experience of our nation's health care system as the gap between 'physical' and 'mental' health services is wide. At the second level is **basic collaboration at a distance**. Similar to the first level, PCPs and MHPs work in separate systems and facilities; however, this time they periodically consult one another about shared cases. The authors note that most of this communication is done over the phone or through written letters. Here, providers are likely to view each other as outside resources. Doherty, McDaniel, and Baird also state that at this level, MHPs and PCPs "operate in their own worlds, have little sharing of responsibility and little understanding of each other's cultures" (p. 28). At the third level is **basic collaboration onsite**. This time PCPs and MHPs work in the same facility or block of offices delivering care that is still largely separate. Proximity gives providers the advantage of consulting with each other on a more regular basis and in a more direct manner (face-to-face meetings). The authors also note that at this level, providers are more likely to have some appreciation for each other's role and the culture of their discipline compared to those mentioned previously. At the fourth level is **close collaboration in a partly integrated system**. Here, PCPs and MHPs share the same facilities and have some systems that are shared (e.g., scheduling, charting). Face-to-face meetings between PCPs and MHPs are regular and treatment plans are often developed collaboratively. The authors also state that at this level, providers have a basic understanding and appreciation for each other's roles and the culture of their profession. Finally, at the highest level of collaboration is what the authors label as **close collaboration in a fully integrated system**. Like the previous two levels, PCPs and MHPs work in a shared environment; however,

now all systems associated with care are shared. Here, providers are on the same team, share the same vision, and have an in-depth appreciation and understanding of each other's roles and areas of expertise. Collaborative routines (e.g., consulting, treatment planning) are expected to be smooth and to occur regularly. In theory, at this level the biopsychosocial model has been fully realized and put into practice.

The Celebrity Model

For the most part, Alexander Blount's conceptualization of the different levels of collaboration between PCPs and MHPs has been the most widely cited model in the literature. Perhaps this is due to its simplicity. Compared to Doherty, McDaniel, and Baird's (1996) model, Blount's (2003) has been collapsed into three levels: *coordinated care*, *co-located care*, and *integrated care*. At the lowest level of collaboration are services that Blount labels as being **coordinated**. In these systems, some work has been done so that information can be exchanged between PCPs and MHPs on a semi-routine or as-needed basis when clients are receiving treatment in both settings. The referral process is usually the trigger for such an exchange. Speaking to that, at this level of collaboration, PCPs and MHPs work in separate systems and facilities, delivering separate care. As a result, there are multiple and separate treatment plans. From the perspective of the patient, there is likely an understanding that neither the PCP nor the MHP know many of the details of the patient's working relationship with the other provider (Blount, 1998). Due to the significant gap in service delivery, health care is still largely viewed as being fragmented.

At the next level is on-site collaboration, or services that Blount describes as being **co-located**. Here, the PCP and MHP work in the same building or block of offices. According to Blount (2003), "Typically, in a co-located setting, there is still a referral process for those cases

that begin as medical cases which are later referred for behavioral health services" (p. 123). At this level, PCPs and MHPs communicate on a more frequent and regular basis, often face-to-face, due to the convenience of their proximity. Like the previous level, instead of working as a unified team, these providers deliver care that is still largely disconnected. As a result, separate treatment records and treatment plans are maintained. At this level, MHPs are expected to be more accustomed to the language associated with primary care. Likewise, it is also believed that PCPs are better attuned to the types of services that MHPs provide. Speaking to this, Blount (2003) states:

> Medical providers can be more adventurous when engaging in conversations about psychosocial issues, knowing that if they discover a situation that seems beyond their expertise, there is someone down the hall who could be involved within a reasonable period of time. (p. 123)

Speaking of proximity, the previous passage alludes to something that would not be possible for PCPs and MHPs working in models that are not co-located: 'curbside consultations' and 'warm hand-offs.' According to Kuo, Gifford, and Stein (1998), "A curbside consultation is an informal process whereby a physician obtains information from another physician to assist in the management of a particular patient" (p. 905). In a collaborative care model that is co-located, this interaction would occur between the client's PCP and MHP in-person. Curbside consults are fairly brief interactions, typically lasting only a few minutes. A warm hand-off is a slightly different interaction. According to the Integrated Behavioral Health Project, a warm hand-off is "the process by which the primary care provider directly introduces the client to the behavioral health provider at the time of the client's medical visit." This interaction is believed to serve as an initial rapport-building moment that would hopefully increase the client's

likelihood of buying into the idea of participating in behavioral health treatment and ensuring that the first appointment be kept. Ideally, MHPs would be able to offer full counseling sessions at the time of the hand-off, avoiding delay in services and minimizing trips to the clinic, but the client's or MHP's schedule may inhibit that from taking place.

Finally, at the highest level of collaboration are services that Blount describes as being **integrated**. Here, PCPs and MHPs work in a shared system, in the same location. However, the true hallmark of this degree of collaboration is the role of the MHP. At this level, the MHP serves as a member of the primary care team "to address the full spectrum of problems the patient brings to their PCP" (Hunter, Goodie, Oordt, & Dobmeyer, 2009, p.4). As a result, the patient is likely to perceive the mental health component of their treatment as part of his or her overall medical care, rather than a specialized adjunct. At this degree of collaboration, there is also one treatment plan and medical records are shared between providers. Blount (2003) further describes some of the details of an integrated model in the following passage:

> Programs are characterized by regular use of screening and outcome assessment for the illness being addressed, a standard set of protocols for addressing the illness, a database to track the care of patients screened into the program, and a staff member designated as managing the program under the direction of a cooperating group of providers. (p. 124)

With this description comes the first mention of a care manager, or staff member devoted to overseeing the patient's entire course of care. The frequent use of screening and assessment measures also gives a better idea as to how comprehensive the services tend to be in an integrated system.

Compared to Doherty, McDaniel and Baird's (1996) model, Blount's does not offer a true zero starting point. In other words, there is the assumption that even at the lowest level of

care (coordinated care), some degree of collaboration exists between PCPs and MHPs. Unfortunately, this does not accurately portray the world of health care as it exists today and therefore can be considered a weakness of Blount's model. On the positive side, Blount's model, while simplistic, allows for some flexibility. In his chapter describing the nature of collaborative care, Blount (2003) states:

> Technically, it is possible for services to be co-located but not coordinated or to be integrated but not co-located, so the most precise definition of these descriptions would be that they are dimensions of collaborative care, not mutually exclusive categories. (p. 122)

A New Standard Framework

In an effort to promote the development of integrated primary and mental health services and create the ability to have a national standard for which future discussions about the topic can be made, the Substance Abuse and Mental Health Services Administration (SAMHSA) recently proposed a new framework of the levels of collaborative care (Heath, Wise Romero, & Reynolds, 2013). In designing this new model, the authors have turned to past models for guidance. As you will see, this new framework was heavily influenced by the two models previously described. This model proposes six levels of collaboration between PCPs and MHPs. While the overarching framework consists of three main categories – coordinated, co-located, and integrated care – there are two levels of degree within each category. A core description of this model can be found on the following page (see Table 1).

With this framework, the authors included 'key elements' to more clearly distinguish the levels in each overarching category. For coordinated care, the key element is communication. The distinction between Level 1 and Level 2 is frequency and type of communication. Heath,

Table 1 – Levels of Collaborative Care

COORDINATED Key Element: Communication		**CO-LOCATED** Key Element: Physical Proximity		**INTEGRATED** Key Element: Practice Change	
LEVEL 1 Minimal Collaboration	LEVEL 2 Basic Collaboration at a Distance	LEVEL 3 Basic Collaboration Onsite	LEVEL 4 Close Collaboration Onsite with Some System Integration	LEVEL 5 Close Collaboration Approaching an Integrated Practice	LEVEL 6 Full Collaboration in a Transformed / Merged Integrated Practice
Mental health, primary care and other healthcare providers work:					
In separate facilities, where they:	In separate facilities, where they:	In the same facility, not necessarily same offices, where they:	In same space within the same facility, where they:	In same space within the same facility (some shared space), where they:	In same space within the same facility, sharing all practice space, where they:
• Have separate systems • Communicate about cases only rarely and under compelling circumstances • Communicate, driven by provider need • May never meet in person • Have limited understanding of each other's roles	• Have separate systems • Communicate periodically about shared cases • Communicate, driven by specific patient issues • May meet as part of larger community • Appreciate each other's roles as resources	• Have separate systems • Communicate regularly about shared cases by phone or email • Collaborate, driven by need for each other's services and more reliable referral • Meet occasionally to discuss cases due to close proximity • Feel part of a larger yet non-formal team	• Share some systems, like scheduling or medical records • Communicate in-person as needed • Collaborate, driven by need for consultation and coordinated plans for difficult cases • Have regular face-to-face interactions about some cases • Have a basic understanding of roles and culture	• Actively seek system solutions together or develop work-a-rounds • Communicate frequently in-person • Collaborate, driven by desire to be a member of the care team • Have regular team meetings to discuss overall patient care and specific patient issues • Have an in-depth understanding of roles and culture	• Have resolved most or all system issues, functioning as one integrated system • Communicate consistently at the system, team and individual levels • Collaborate, driven by shared concept of team care • Have formal and informal meetings to support integrated model of care • Have roles and cultures that blur or blend

Adapted from Heath, Wise Romero, & Reynolds (2013).

Wise Romero, and Reynolds (2013) state, "With increased communication, providers have stronger relationships and greater understanding of the importance of integrated care and the skills that different providers possess" (pp. 6-7). Here, the assumption is that as communication between MHPs and PCPs increases so does the coordination of care. The key element for co-located care is physical proximity. While providers can be co-located and have no collaborative working relationships, close proximity creates greater opportunities for trust and relationship building to occur and also reduces time spent traveling from one provider to another. The real distinction between Level 3 and Level 4 is the degree to which systems are shared. Lastly, the key element for integrated care is practice change. With a true integrated care system comes the blending of cultures associated with primary and mental health care. This often proves to be a huge challenge as providers, at first, often resist changing the style in which they practice. The authors describe this in greater detail in the following passage:

> Across many integrated implementations at several levels, almost every practitioner wants integrated care, and believes it is the direction for healthcare to move towards, until they realize it requires they change how they practice. It is at that point they often try to change the concepts of their integration efforts to preserve how they currently practice. (Heath, Wise Romero, & Reynolds, 2013, p. 7)

As the culture changes, MHPs are, for the most part, no longer expected (or allowed) to have 50-minute sessions with clients, nor are their sessions viewed as sacred interactions that cannot be interrupted. MHPs in integrated care models are expected to be readily available. Due to working in a faster-paced system, MHPs would be expected to answer the phone when meeting with a client and also to have more of an open door policy to allow for quick consultations with PCPs.

Overall, collaborative care aims to bring mental health and primary care together. This task is not an easy one as each profession, for the most part, has evolved and existed in its own respective silo. The goal of integrated care is to transform these two fields into a single whole. It is hypothesized that doing so comes with a number of benefits. These propositions are discussed in the following section.

Proposed Benefits of Integrated Care

Throughout the literature, researchers and clinicians have proposed that integrated models of care have a number of benefits over traditional or fragmented models of health care. The following section highlights some of the most often discussed goals and proposed benefits of integrated care.

Integrated models of care aim to:

- Improve the quality of care.
- Improve access to services.
- Increase collaboration among professionals.
- Decrease the complexity of care.
- Help avoid the unnecessary duplication of services.
- Normalize the need for mental health support.
- Reduce the stigma associated with seeking mental health services.
- Increase mental health referral compliance rates.
- Improve diagnosis.
- Promote higher client satisfaction.
- Promote higher provider satisfaction.
- Result in fewer referrals to specialty mental health providers.
- Reduce health care costs associated with providing fragmented services.
- Improve treatment adherence.

Reviewing each of the proposed goals and benefits mentioned above is beyond the scope of this article. Overall, it is important to mention that some of these propositions have been shown to exist, to varying degrees, while others, are merely hypothesized. The current study aims to take a closer look at three of these items: referral compliance, client satisfaction, and treatment adherence.

Referral Compliance

One of the most popular areas in collaborative care research focuses on mental health referral compliance rates. According to deGruy (1997), "One-third to one-half of primary care patients will refuse referral to a mental health professional" (p. 4). Similar non-compliance rates were found in a more recent literature review by Hampton-Robb, Qualls, and Compton (2003). These authors found that 16% to 67% of patients fail to attend initial mental health care appointments. As non-compliance rates are often shown to be moderately high in models of care that feature low levels of collaboration, some authors have turned to studying the reasons for appointment non-attendance. Delaney (2012) identified two types of obstacles that commonly interfere with appointment attendance: *emotional barriers* and *practical barriers*. Emotional barriers can entail a number of things: stigma associated with seeking mental health support, the strength of the client-clinician relationship, the client's perceived need for mental health services, etc. The most frequently identified practical barriers include the following: the financial burden on the client (cost of appointment), and the length of waiting time between the time the referral was made and when the appointment is scheduled. Despite what may be getting in the way, these high non-compliance rates are a huge area of concern. For one, when a client does not show up to their initial appointment, not only does that individual not receive care that is recommended to them, the clinic loses money. To make matters worse, for every appointment

that is missed, another potential client is kept from being seen. A study by Apostoleris (2000) was interested in examining ways to decrease non-compliance rates by looking at the effects of completing a warm hand-off. In the study, which took place in a co-located model of care, of the clients who were introduced to the MHP by their PCP at the time the mental health referral was recommended, 76% attended the first appointment. Out of those who received a referral, but not a warm hand-off, 44% kept the first appointment. In other words, warm hand-offs seem to bolster a client's likelihood of complying with the referral. These findings have important clinical implications for models of care that are co-located and integrated.

Client Satisfaction

Although often less discussed, researchers hypothesize that client satisfaction plays a role in treatment adherence and program success. According to Fuderburk, Fielder, DeMartini, and Flynn (2012), "It is extremely important that the patients are satisfied with clinical services provided by a new program, otherwise patients may not remain engaged or comply with treatment recommendations, which could compromise treatment success" (p. 131). A review of the literature indicates that a majority of studies measuring client satisfaction have done so in a non-experimental way. For example, most studies have measured levels of client satisfaction with services in co-located and integrated models of care, but not in any way that allows for a meaningful direct comparison to be made between different models of collaboration. A literature review by Blount (2003) found 16 studies indicating that clients in co-located and integrated models of care reported high levels of satisfaction. A study by Fuderburk, Fielder, DeMartini, and Flynn (2012) is a good example of these types of studies. In their study, which was housed at Syracuse University Health Services, the authors implemented a new system of care which they termed the "Integrated Behavioral Health Care" (IBHC) program. This program allowed

MHPs and PCPs who shared the same client to work together in a highly collaborative way. Students who received services in the IBHC program were later surveyed (through an online questionnaire) on their level of satisfaction with the program. Results indicated that a majority of the sample of students were satisfied with the services they received. While this type of research is important and promotes the development of integrated models, the results remain largely static as we do not have anything to compare them to. Experimental research comparing two or more systems of care is much needed as it would allow us to better determine if certain models of collaborative care produce higher degrees of satisfaction on behalf of the client.

Treatment Adherence

The debate as to whether clients better adhere to treatment regimens in integrated models of care compared to those receiving services in fragmented models of care is a popular one amongst researchers. An overwhelming majority of the studies that examine levels of treatment adherence in collaborative models of care are targeted to specific populations. These studies often follow clients with specific medical and mental diagnoses (e.g., type 2 diabetes, depression, etc.). In his literature review, Blount (2003) identified 11 studies that supported the notion that clients in co-located and integrated models of care showed higher levels of treatment adherence compared to clients who received less coordinated services. Unfortunately, all of these studies focused more on the client's adherence to primary care treatment guidelines. Consequently, adherence has largely been measured by monitoring a client's ability to take medication as it has been prescribed. This type of research, while informative, ignores, for the most part, the mental health component of an individual's treatment. Yes, taking anti-depressant medication within the guidelines of the prescription is certainly an element of mental health treatment adherence, but other dimensions should be considered as well. Another common method for measuring

mental health treatment adherence has involved monitoring psychotherapy attrition rates. Clients who fail to attend a predetermined number of sessions, or drop-out before therapy has been successfully terminated, are often viewed as not adhering to the treatment. While this type of research contributes to the literature, the author does not believe that these are the only variables that should be looked at when determining if a client has adhered to their mental health treatment. Another problem with this way of measuring treatment adherence is that it completely leaves out the opinion of the MHP. Future studies need to take into account the MHP's outlook on the course of treatment.

Case Vignettes

Before delving into the proposed research study, the author believes that it would be valuable to see, from the perspective of the client, what participation in two very different systems of care might look like. The following serves as a potential illustration as to what someone receiving health care services in an integrated model of care may experience:

Kate is a 35-year-old White female currently attending graduate school. She is mildly overweight and has a history of hypertension. She identified herself as being single. Kate recently visited her primary care provider after experiencing what she described as a "mild heart attack" while she was driving home from school. During this experience, Kate stated that her heart was "pounding," that she could not catch her breath, felt "dizzy" and sincerely believed that she was going to die. Kate also shared that she has been having a difficult time falling asleep at night - lately only getting 4-5 hours of sleep. Kate wondered if this "attack" was caused by her recent attempt at exercising more regularly. After gathering more information about her current circumstances and recognizing symptoms of a panic attack, Kate's physician

recommended that she meet with a psychologist. Despite being hesitant to this idea at first, Kate agreed that she would meet with a psychologist "at least once." Walking down the hall together, Kate's physician introduced her to the psychologist, who he described as being a "member of the team." After briefly summarizing Kate's experiences to the psychologist, the physician made a warm hand-off, leaving the two to meet in private. During the session, the psychologist conducted a brief clinical interview and had Kate participate in a 10-minute progressive muscle relaxation exercise. The psychologist encouraged Kate to practice this technique regularly throughout the next week. The psychologist also recommended that they meet biweekly for a total of 4-6 sessions. Kate ended up following this treatment plan and returned to counseling for the second scheduled appointment.

The following serves as a potential illustration as to what someone receiving health care services in a traditional model of care may experience:

Adam is a 56-year old Hispanic male. He is currently married and has two daughters (18 and 21 years old), one of which recently left to attend college. Adam has been previously diagnosed with type 2 diabetes and has a history of chronic pain (localized to his lower back). Adam recently visited his primary care provider as his lower back pain had been getting worse. After much prompting, Adam disclosed that he had also been feeling very irritable and sad over the past two months. After revealing that he had been experiencing frequent thoughts of suicide, Adam's physician provided him with a prescription for an antidepressant and suggested that he visit with a psychologist. At the end of the appointment, Adam's physician handed him a piece of paper containing the names of two psychologists while stating, "These two guys are pretty good. Give one of them a call to set up an initial consultation." Due to the location of these two psychologists being on the opposite side of town and the fact that Adam viewed psychologists as

individuals that only helped “crazy people,” he decided not to give either one a call. Although he picked up the prescription, Adam decided that he did not want to take any medication for his mood as he was convinced that it was a “sign of weakness.” After noticing Adam’s health and mood worsen, he decided to visit his primary care provider two months later at the request of his wife.

PROPOSED RESEARCH STUDY

Statement of Purpose

As we have seen, the literature suggests that models of health care that feature a high degree of collaboration between mental health and primary care providers are hypothesized as being superior (in a number of domains) to models that feature little-to-no degree of collaboration between said providers. This proposal encourages future experimental research to test that claim by taking two models of health care and pitting them against one another. In this proposal, conceptually, the author is interested in looking at the extreme ends of the collaborative care continuum. Using the new framework proposed by Heath, Wise Romero, and Reynolds (2013) as a guide, the matchup would essentially be Level 1 (Minimal Collaboration) vs. Level 6 (Full Collaboration in a Transformed/Merged Integrated Practice). For the sake of simplicity, this proposal will refer to those two independent variables as "**Traditional Care**" and "**Integrated Care**" from this point forward. The outcome variables of interest to this proposal include the following: the client's compliance with their primary care provider's referral to meet with a mental health provider ("**Referral Compliance**"), the client's satisfaction with overall received services ("**Client Satisfaction**"), and the client's adherence to the mental health component of their treatment ("**Treatment Adherence**"). While this proposal aims to provide a general snapshot of the relationship between these variables, the author hopes that future studies will focus on breaking each down in greater detail. The hypotheses as to how these variables might interact with one another are discussed in the following section.

Research Questions and Hypotheses

Research Question 1: Are clients who are referred for mental health services by their primary care provider more likely to comply with that referral (e.g., attend the initial session) if

they are receiving care in an integrated model or in a traditional model?

Hypothesis 1: It is hypothesized that significantly more clients will comply with their primary care provider's referral for mental health services if they are receiving care in an integrated model compared to those who receive services in a traditional model due to the convenience of proximity provided in the former.

Research Question 2: Are clients more likely to report higher levels of satisfaction with all of the health care services they receive if those services are delivered in an integrated model or in a traditional model?

Hypothesis 2: It is hypothesized that clients receiving care in an integrated model will report significantly higher levels of satisfaction with all of the services they receive compared to those who receive care in a traditional model due to the convenience of proximity and the perception that each provider is working as a cohesive team in the former.

Research Question 3: Are clients who receive mental health services more likely to adhere to their treatment (e.g., attend sessions, actively work on goals, etc.) if they are receiving care in an integrated model or in a traditional model?

Hypothesis 3: It is hypothesized that clients receiving mental health services in a traditional model will be less likely to adhere to their treatment compared to those receiving mental health services in an integrated model due to there being one treatment plan, developed and encouraged by multiple providers, in the latter.

Methods

The foundation of this proposed study would begin at an integrated care center. This setting would serve as the entry point for all of the participants. Eligibility to participate in the study would narrow through a series of progressive stages with specific criteria needing to be

met on behalf of the client at each point. For starters, each participant included in this study would have to enter the system specifically seeking help from a PCP. This is consistent with the finding that most individuals seek help from a primary care provider first, regardless of the presenting concern. As a result, individuals requesting to see a MHP initially would not be included in this study. Health conditions, history of medical diagnoses and reason for medical visits would vary between individuals. To help control for additional variance (e.g., provider experience, provider style, etc.), every participant would meet with the same PCP. On the initial visitation, when suspecting a possible mood disorder, the PCP would use The Patient Health Questionnaire (PHQ-9) to screen for the presence and severity of clinical depression. Only clients receiving scores $\geq$15 (diagnosed with "moderately severe depression" to "severe depression") would be included in this study. At this point in time, clients would be informed by the PCP about participating in a study that would allow the PCP to communicate with any provider he referred the client to after their initial visitation. At this time, clients would either give consent or decline to participate in the study. No incentives would be given to encourage participation. Those who agree to participate in the study would then be randomly placed into one of two systems of care (e.g., traditional or integrated care). Qualities of these two models reflect the descriptors of 'Level 1' and 'Level 6' of Heath, Wise Romero, and Reynolds' (2013) framework (see Table 1). To determine which system a client would be placed in, the PCP would draw a number (1-10) out of an envelope at the beginning of each appointment. Odd numbers indicate placement in the integrated care model; evens in the traditional care model. Clients placed in the integrated care model would, in a sense, be given the opportunity to experience the natural working behavior of the system as this was how it was designed to operate. Other clients would be placed into a system designed to *simulate* a traditional model of

care – one that featured no collaboration between providers. Regardless of which system a client was placed in, the PCP would make a referral for each client to see a MHP. In the integrated care model, the PCP would complete a warm hand-off to one of two MHPs. In the traditional care model, the PCP would refer the client to see one of two specific MHPs out in the community. Clients who went to other MHPs in the community would not be included in this study. MHPs in the traditional model would contact the PCP at the time the referral was attended and subsequently again after four psychotherapy session were attended by the client.

Measures

The Patient Health Questionnaire

The Patient Health Questionnaire (PHQ-9) is a multipurpose instrument for screening, diagnosing, monitoring and measuring the severity of depression. The PHQ-9 incorporates DSM-IV depression diagnostic criteria with other leading major depressive symptoms into a brief self-report tool. The measure is designed to be completed by the client and scored by the clinician. In addition to making criteria-based diagnoses of depressive disorders, the PHQ-9 has been established as a reliable and valid measure of depression severity (Kroenke, Spitzer, & Williams, 2001). The PHQ-9 was developed by R. Spitzer, J. Williams, and K. Kroenke in 1999.

Clients are given the following prompt at the beginning of the questionnaire: "Over the last 2 weeks, how often have you been bothered by any of the following problems?" Clients are then given a list of depressive symptoms to be rated. Sample items include "Little interest or pleasure in doing things" and "Feeling down, depressed, or hopeless." The PHQ-9 is scored on a four point Likert scale with response options ranging from "Not at all" to "Nearly every day." Higher scores indicate greater depression severity with scores potentially ranging from 0 to 29. PHQ-9 scores of $\leq$4, 5, 10, 15, and $\geq$20 represent 'minimal,' 'mild,' 'moderate,' 'moderately

severe,' and 'severe' depression. A follow-up, non-scored question (item 10) screens and assigns weight to the degree to which depressive problems have affected the client's level of function. See Appendix A for this measure.

Client Satisfaction Questionnaire

The Client Satisfaction Questionnaire (CSQ-8) will be used to asses an individual's level of satisfaction with received services of care. The CSQ-8 is a self report measure with research suggesting that it is useful as a brief global measure of client satisfaction. The CSQ-8 was developed by D. Larsen, C. Attkisson, W. Hargreaves, and T. Nguyen in 1979.

Sample items include "How would you rate the quality of services you have received?" and "Did you get the kind of service you wanted?" The CSQ-8 is scored on a four point Likert scale with response options tailored to each question (e.g., "Poor" to "Excellent" and "No, Definitely Not" to "Yes, Definitely"). Higher scores indicate higher client satisfaction with scores potentially ranging from 8 to 36. Before participants complete the CSQ-8 they are given the following prompt: "When answering each question, please take into account all of the care that you have received (e.g., medical visits, psychotherapy, etc.)." The CSQ-8 also provides clients with a space at the bottom of the form to write additional thoughts, concerns, suggestions, etc. See Appendix B for this measure.

Mental Health Treatment Adherence Questionnaire

The Mental Health Treatment Adherence Questionnaire (MHTAQ-6) was designed by the author to measure a client's general level of adherence to their mental health treatment. The measure is to be completed by the client's mental health provider. As a result, it is a subjective measure with reliability varying across providers.

Sample items include “The client regularly attended sessions” and “The client actively worked on established goals for therapy.” The MHTAQ-6 is scored on a five point Likert scale with response options ranging from “Strongly Disagree” to “Strongly Agree.” Higher scores indicate higher levels of treatment adherence with scores potentially ranging from 6 to 30. A copy of this measure can be found in Appendix C.

DISCUSSION

Summary

Over the past 20 years, researchers and clinicians have increasingly theorized and written about the benefits of integrated care. Some of the postulated benefits have been tested and replicated in studies, while many have not. A number of studies have measured variables of interest (e.g., provider satisfaction, referral compliance) as a single system moves out of a lower level of collaboration and into a higher one over a period of time. Other studies have measured outcome variables in stand-alone systems of care without directly comparing them to other systems that feature lower or higher degrees of collaboration. All of these studies are valuable and add important contributions to the literature. Unfortunately, not many studies have directly compared two or more systems (featuring varying levels of collaboration between PCPs and MHPs) to one another. To the author's knowledge, a study like the one proposed here (where clients are randomly selected to participate in one of two models at the extreme ends of the collaborative care continuum) has never been completed, nor attempted. Perhaps this is due to the scope, complexity, and high resource demand a study of this nature would entail. Nonetheless, the author believes that a study of this kind would be possible to design and implement. Such a study would no doubt be a tremendous contribution to the literature and have vast clinical implications.

Implications

If models of care that feature higher degrees of collaboration between providers within the fields of medicine and mental health are in fact superior (in various domains) to models featuring low levels of collaboration between said providers it could have huge implications for our nation's health care system. According to Kelly and Coons (2012), "The use of integrated

care models has dramatically increased over the last decade in both private and public health care sectors" (p. 586). As integrated models of care continue to grow in number so too will our understanding of their strengths and weaknesses. It is important to remember that no two systems of care, regardless of their label, are the exactly same. For example, a great deal of variation can exist between two models of care that are considered to be integrated, co-located, etc. One thing remains certain, collaborative care models aim to directly combat a health care system that largely perpetuates the dualistic provision of services. As these models continue to become more widespread, over time, the burden placed on PCPs to deliver mental health services will likely lessen. This can lead to greater accuracy in diagnosing mental disorders and overall improvements in quality of service delivery. It could also lead to reduced costs in health care expenses.

While the results remain to be seen, the author hypothesizes that the integrated care model proposed in this study would be superior in comparison to the traditional care model in three outcomes. For one, the author hypothesizes that there would be a significant difference in mental health referral compliance rates. It is hypothesized that individuals in the integrated care model would be more likely to attend the first mental health referral appointment than individuals in the traditional model. If confirmed, these findings would be comparative to those of previous studies. Not only would these findings support the notion that integrated models of care create greater access to mental health services, they would also suggest that there may be something inherent in these systems of care that de-stigmatizes or normalizes the need for mental health support. Additionally, one could even make a case for referral compliance being considered a measure of treatment adherence in and of itself.

Secondly, it is hypothesized that individuals in the integrated care model will report

significantly higher levels of satisfaction with all of the services they receive compared to those in the traditional model. This outcome is hypothesized for a number of reasons. For one, the author believes that individuals assigned to participate in the integrated care model would: have a less difficult time navigating the healthcare system, complete less paperwork, and experience their healthcare concerns being addressed and treated in a holistic and collaborative way. The author also believes that individuals assigned to participate in the traditional care model would: have to travel longer distances to receive all of their care, complete additional (and duplicative) paperwork, and navigate different financial delivery services. Future studies are encouraged to gather qualitative data to better understand what factors contribute to an individual's level of satisfaction with their healthcare services.

Lastly, it is hypothesized that clients in the integrated model would better adhere to the mental health component of their treatment compared to those in the traditional model. The author makes this hypothesis due to the fact that individuals in the integrated care model would be receiving the same treatment plan and advice from a team of clinicians in contrast to individuals in the traditional care model that would be receiving multiple treatment plans and guidelines from clinicians that are not collaborating or communicating with one another. As treatment adherence and non-adherence are often the best predictors of treatment success, the results of this research question could have a great impact on the future of how our nation's healthcare system is structured and operated.

Limitations and Future Directions

There are limitations to the proposed study that are worth mentioning. For starters, it is important to remind oneself that a great deal of variance within the sample is likely to be present. Within- and between-group differences (e.g., variance in age, gender, race, socioeconomic status,

and medical history) are expected to be immense. Speaking of medical history (e.g., previous medical and mental health conditions), some participants would be coming into the study with multiple health concerns and prior diagnoses (e.g., diabetes, hypertension, obesity, etc.), while others would likely have few or none. No doubt, these variables play a role in an individual's capacity to seek help and in their ability to participate in treatment. Researchers are encouraged to take all of these variables into consideration when designing future studies and analyzing the raw data. For example, future studies may consider narrowing the diversity of the sample (e.g., studying only subjects with diabetes) as a way of controlling for additional variance. Controlling for said variables would then allow researchers to examine the unique effects each model of collaborative care had on the dependent variables of interest.

Variance on behalf of the providers of care is another important element to take into account. Due to the scope and lengthy time commitment that would likely come with such a proposed study, using a single MHP for participants in each system is out of the question. Doing so would have no doubt helped control for differences in provider experience, style, training and philosophical orientation. As two MHPs would be used in each model of care, differences in beliefs as to what constitutes low versus high levels of treatment adherence may exist. This can be seen as another criticism of the study.

Regarding referral compliance, future studies may want to examine the unique effects of the warm hand-off. More specifically, within an integrated model of care, researchers may want to look at what it is that specifically helps to promote a client's compliance with the referral for mental health services. Is the convenience of proximity (e.g., being housed in the same facility) the most important system trait, or is it the personal introduction to the mental health provider

made by the PCP? Perhaps it is something else entirely. This is a question that is worth looking at further and one that could have huge clinical implications.

Finally, a discussion about the ethicality of this study is necessary. A case could be made that individuals placed into the traditional model of care are most likely going to be receiving less care overall due to higher levels of non-compliance with referrals for mental health services as found in and supported by the literature. One could then say that these individuals would be receiving inferior care. This is potentially a major drawback of the study as it could directly put the client's wellbeing at risk.

APPENDICES

Appendix A: The Patient Health Questionnaire

Appendix B: Client Satisfaction Scale

Appendix C: Mental Health Treatment Adherence Questionnaire

Appendix A

THE PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

Over the past 2 weeks, how often have you been bothered by any of the following problems?	**Not At All**	**Several Days**	**More Than Half the Days**	**Nearly Every Day**
1. Little interest or pleasure in doing things	0	1	2	3
2. Feeling down, depressed of hopeless	0	1	2	3
3. Trouble falling or staying asleep, or sleeping too much	0	1	2	3
4. Feeling tired or having little energy	0	1	2	3
5. Poor appetite or overeating	0	1	2	3
6. Feeling bad about yourself—or that you are a failure or have let yourself or your family down	0	1	2	3
7. Trouble concentrating on things, such as reading the newspaper or watching television	0	1	2	3
8. Moving or speaking so slowly that other people have noticed. Or the opposite—being so fidgety or restless that you have been moving around a lot more than usual	0	1	2	3
9. Thoughts that you would be better off dead, or of hurting yourself	0	1	2	3

Column Totals _____ + _____ + _____

Column Totals Together _____

10. If you checked off <u>any</u> problems, how <u>difficult</u> have these problems made it for you to do your work, take care of things at home, or get along with other people?	Not difficult at all Somewhat difficult Very difficult Extremely difficult	_____ _____ _____ _____

Appendix B

CLIENT SATISFACTION QUESTIONNAIRE (CSQ-8)

Please help us improve our program by answering some questions about the services you have received. We are interested in your honest opinions, whether they are positive or negative. When answering each question, **please take into account all of the care that you have received** (e.g., medical visits, psychotherapy, etc.). *Please answer all of the questions.* We also welcome your comments and suggestions. Thank you very much; we really appreciate your help.

Circle your answer:

1. How would you rate the quality of service you have received?

4	3	2	1
Excellent	Good	Fair	Poor

2. Did you get the kind of service you wanted?

1	2	3	4
No, definitely	No, not really	Yes, generally	Yes, definitely

3. To what extent has our program met your needs?

4	3	2	1
Almost all of my needs have been met	Most of my needs have been met	Only a few of my needs have been met	None of my needs have been met

4. If a friend were in need of similar help, would you recommend our program to him or her?

1	2	3	4
No, definitely not	No, I don't think so	Yes, I think so	Yes, definitely

5. How satisfied are you with the amount of help you have received?

1	2	3	4
Quite dissatisfied	Indifferent or mildly dissatisfied	Mostly satisfied	Very satisfied

6. Have the services you received helped you to deal more effectively with your problems?

4	3	2	1
Yes, they helped a great deal	Yes, they helped	No, they really didn't help	No, they seemed to make things worse

7. In an overall, general sense, how satisfied are you with the service you have received?

4	3	2	1
Very satisfied	Mostly satisfied	Indifferent or mildly dissatisfied	Quite dissatisfied

8. If you were to seek help again, would you come back to our program?

1	2	3	4
No, definitely not	No, I don't think so	Yes, I think so	Yes, definitely

Any comments or suggestions?

Appendix C

MENTAL HEALTH TREATMENT ADHERENCE QUESTIONNAIRE

Please help us determine the degree to which you believe your client has adhered to their psychotherapy, thus far, by answering all of the following questions. Thank you for your time.

Circle your answer:

1. The client regularly attended sessions.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral / No Opinion	Somewhat Agree	Strongly Agree

2. The client attended sessions on time.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral / No Opinion	Somewhat Agree	Strongly Agree

3. The client frequently cancelled appointments and/or made attempts to reschedule.

5	4	3	2	1
Strongly Disagree	Disagree	Neutral / No Opinion	Somewhat Agree	Strongly Agree

4. The client actively worked on established goals for therapy.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral / No Opinion	Somewhat Agree	Strongly Agree

5. The client actively participated during sessions.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral / No Opinion	Somewhat Agree	Strongly Agree

6. The client regularly completed homework assignments outside of therapy.

1	2	3	4	5
Strongly Disagree	Disagree	Neutral / No Opinion	Somewhat Agree	Strongly Agree

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