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Gratitude, Resilience and Post-Traumatic Growth among Kidney Transplant Recipients

by

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Honors Thesis:

Submitted to:

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Richmond, VA

May 4, 2020

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## Gratitude, Resilience and Post-Traumatic Growth among Kidney Transplant Recipients

## Abstract

Chronic health conditions, such as end-stage renal disease (ESRD), can produce detrimental physical, psychological, and emotional effects (Schulz & Kroenke, 2015). While transplantation helps to alleviate the physical symptoms, other psychosocial problems can remain. The present study sought to investigate whether organ transplant recipients utilize certain strength-based attributes—gratitude, resilience, and post-traumatic growth—when coping with life post-transplant. This mixed-methods study recruited eight ( $N=8$ ) kidney transplant recipients, who took part in semi-structured interviews followed by a survey. Though quantitative data was limited due to COVID-19 interruptions, the qualitative data revealed evidence of gratitude, resilience, and post-traumatic growth being used by the participants to cope with their condition. It is anticipated that the results from this exploratory study can aid in the development of psychological interventions for organ transplant recipients, as well as raise awareness of their conditions and experiences.

*Keywords:* End-Stage Renal Disease (ESRD), Strength-Based Attributes, Organ Transplantation, Gratitude, Resilience, Post-traumatic Growth

### **End-Stage Organ Disease**

Broadly defined, chronic health conditions are illnesses that persist over a long period of time, typically lasting over a year (National Center for Chronic Disease Prevention and Health Promotion (NCCDPHP), 2019). These illnesses lead to a substantial decline in health status, including the possibility of organ failure. In the case of end-stage organ disease (ESOD), such as end-stage renal disease (ESRD) and end-stage liver disease (ESLD), adverse emotional, social, and lifestyle effects may accompany the other presenting physical symptoms (Schulz & Kroencke, 2015). The best course of treatment typically involves organ transplantation; however, this outcome is not always guaranteed. Treatments such as hemodialysis are common as well, but often lead to more difficulties and lower quality of life (QoL) (Schulz & Kroencke, 2015). In fact, Ahmad and Al Nazly (2015) found that, for hemodialysis patients, psychological stressors tended to outweigh physiological stressors. So, as one might imagine, conditions such as ESRD and ESLD are particularly stress- and anxiety-inducing for patients, and often produce additional effects such as depression, aggression, and low confidence levels (Schulz & Kroencke, 2015). In addition, fears of the unknown (such as if and when the patient will receive an organ transplant) and anxiety concerning death are not uncommon, and the burden of financial and work responsibilities can also become difficult to bear. As Schulz and Kroencke (2015) suggest, all of these combined factors can become overwhelming for the patient as they face a plethora of challenges on a daily basis.

One's health usually improves after one receives an organ transplant, but other problems can and do continue to exist. Mental health, cognitive functioning and one's social and personal life can all remain problematic after transplant (Rainer et al., 2010). For example, Schulz and Kroencke (2015) found that transplant recipients often experience stress related to returning to

work, financial issues, and adhering to a strict and healthy lifestyle. Psychological disorders such as depression, anxiety, and post-traumatic stress disorder (PTSD) can be common in this population as well, and fears of a need for re-transplantation and death from organ rejection are not unheard of (Rainer et al., 2010; Schulz & Kroencke, 2015). Stress presents in ESOD patients in extensive, detrimental ways; therefore, it is imperative that coping strategies and other strength-based attributes be examined in further depth so that patients can overcome the difficulties they face. The present study aims to do just this, especially in regard to gratitude, resilience, and post-traumatic growth.

### **Strength-Based Attributes**

As one can see, ESOD and other similar chronic illnesses can have devastating effects. Yet, many patients are not necessarily defeated by their conditions. As previous research suggests, patients often exhibit persevering behaviors and cognitions known as strength-based attributes. Such attributes include hope, resilience, gratitude, forgiveness, and post-traumatic growth, as well as religion and spirituality, among many others. Each of these can play a protective role against a variety of negative health outcomes. More specifically, both Berry et al. (2005) and Hill et al. (2013) found that strength-based attributes such as gratitude and forgiveness correlate positively with one's health and well-being. Additionally, hope has been found to be a useful coping method for negativity and stress, and graft rejection tends to decrease within the presence of post-traumatic growth (Duggal et al., 2016; Látos et al., 2015). For dialysis patients, acceptance and positive reappraisal are associated with better mental health outcomes and higher quality of life as well (Ahmad & Al Nazly, 2015; Barberis et al., 2017). Considering the hardships that ESOD patients face both before and after organ transplantation, it would be interesting and valuable to assess whether strength-based attributes positively affect

ESOD patients' overall health. This study serves to investigate whether specific strategies—namely gratitude, resilience, and post-traumatic growth—provide benefits for kidney transplant recipients post-transplant.

### ***Gratitude***

Gratitude, or feeling thankful or appreciative for aspects of one's life, has been studied frequently in the existing literature in regard to ESOD and other chronic illnesses. Hill et al. (2013) found that, among the general public, gratitude is linked to better physical health outcomes in the present and can alter one's physical health over time, in part due to better psychological health (which has also been found to correlate with gratitude). Similar results have been found in populations with chronic disease. For example, in a study that analyzed psychosocial resources (e.g. gratitude) utilized by heart failure patients, Sacco et al. (2014) found that participants reported feeling gratitude for social support, being able to participate in leisure activities, their religion/spiritual beliefs, and for life in general. In comparison, Adorno et al. (2017) performed a cross-sectional mixed-methods study of cancer survivors and the positive aspects (if any) in their lives. They found that gratitude was one of the top aspects reported by participants, especially older males. The cancer survivors particularly felt gratitude towards diagnosis and treatment, in that neither were as unpleasant as expected (Adorno et al., 2017).

Gratitude has also been illustrated among transplant recipients. Anand and Kumar (2014) found that, for heart, lung, and liver transplant recipients, gratitude was especially expressed towards the organ donor and the care team, as well as for the participants' lives. In a qualitative study, Kamran and Ogden (2016) asked kidney transplant recipients about several aspects of their lives and whether any positive changes occurred. Gratitude emerged as one of the five main themes reflecting participants' perspectives, which also included optimism, self-identity,

emotional issues and morbidity, as well as transplant-related fears and anxieties, and future concerns. The participants indicated that they felt grateful for their donated kidneys, their donors, their families, and for the healthcare professionals involved. Clearly, gratitude can play a large role in the experience of someone with a chronic illness, at least in terms of coping with the stressors that accompany one's disease.

### ***Resilience***

Simply put, Smith et al. (2008) define resilience as the ability to adapt to, “bounce back” from, or recover from stress. They also emphasize that things like optimism, active coping, and social support all play a role in resilience (Smith et al., 2008). In their review, Duggal et al. (2016) found that resilience, along with hope, can act as a protective factor against poor mental health outcomes, especially as they relate to medical conditions such as chronic illness. In regard to kidney transplant recipients, Tian et al. (2016) report a negative relationship between resilience and psychological distress, and even found that resilience may act as a mediator between social support and depression. In another study, Müller et al. (2015) compared those with ESRD both before and after kidney transplant in terms of mental health, resilience, and coping styles. They found that there were no significant differences between groups in terms of anxiety, depression, resilience, and coping methods. The authors do admit that perhaps resilience may be built over time, but at three-year follow up, this did not appear to be the case (Müller et al., 2015). These results may suggest that resilience may already be a coping method for patients before they receive an organ transplant, thus the lack of increase in use over time. As such, it is possible that both groups were resilient patients in general. Overall, there seems to be an abundance of evidence for the utilization of resilience as a coping method for individuals with chronic health conditions, including ESRD.

### *Post-traumatic Growth*

Post-traumatic growth (PTG) refers to the positive personal change that can occur after a traumatic or highly stressful event. According to Kamran and Ogden (2016), there are five components of PTG: new opportunities, closer relationships with others, increased emotional and psychological strength, appreciation for life, and change in spirituality. Schmidt et al. (2011) applied the concept of PTG in their study of coping behaviors in cancer survivors, and found a link between PTG and active coping, positive reframing, and spirituality. Ahmad and Al Nazly (2015) also discovered positive reappraisal, a concept similar to PTG, as the most used coping strategy among ESRD hemodialysis patients in dealing with psychological and physiological stress. Heart, lung, and liver transplant recipients seem to benefit from PTG after transplantation. Anand-Kumar and colleagues (2014) reported that these transplant recipients tended to perceive a change in perspective, higher gratitude for their social support, and spiritual growth (Anand-Kumar et al., 2014). In kidney transplant recipients specifically, Kamran and Ogden (2016) found qualitative evidence for PTG and positive growth in general, especially in terms of personal identity and appreciation for social support. Furthermore, evidence of PTG as a protective factor was found again in kidney transplant recipients, as well as a negative relationship between PTG and risk of graft rejection at three years post-transplant (Látos et al., 2015). As one can see, PTG seems to be experienced by a variety of people coping with a chronic illness, and appears to be associated with positive psychological outcomes.

In light of this past research, it seems clear that coping strategies such as gratitude, resilience, and post-traumatic growth can be useful for those with a chronic illness. The present study seeks to add to the literature by examining these strategies in kidney transplant recipients. Because ESRD and transplantation can be so demanding on the mind and body, it is important



that we understand whether protective factors exist to alleviate these burdens. It is also imperative that we understand the mechanisms behind these factors so that other kidney transplant recipients can implement them in their own lives.

### **The Present Study**

This exploratory mixed-methods research project aims to understand the ways in which gratitude, resilience, and post-traumatic growth are connected to patients' ability to cope with a kidney transplant. The qualitative component will be guided from a phenomenological perspective, while the quantitative component will consist of a battery of measures in the form of a self-report survey. My main research questions are as follows:

- 1) What strength-based strategies do kidney transplant recipients utilize to manage their condition?
- 2) Do kidney transplant recipients employ coping methods such as gratitude, resilience, and post-traumatic growth?

## **Method**

### **Participants & Recruitment**

A purposeful sample of participants ( $N=8$ ) consisted of primarily kidney transplant recipients, all being at least 18 years old. A breakdown of the sample characteristics was unquantifiable due to COVID-19 interruptions in data collection, especially of the quantitative component. We recruited each participant from a medical center in the southeastern region of the United States. This was accomplished mostly by telephone.

In order to qualify, the participants had to speak, read, and understand English. Any patient who was under the age of 18 or who had a severe cognitive impairment was excluded

from the study. In addition, each participant provided informed consent prior to the beginning of the study.

### **Procedure**

As part of a larger study, I anticipated conducting a mixed-methods experiment, which consisted of semi-structured interviews and a survey that was to be completed by all participants. However, due to the unexpected consequences of the COVID-19 pandemic, I decided to rely primarily on qualitative data. This is because some participants, despite engaging in the semi-structured interviews, were unable to complete the survey portion.

The qualitative portion of the study (i.e. the interviews) followed a phenomenological approach, which entails investigating the perceptions of those who experience a particular event—in this case, kidney transplantation (Isaacs, 2004). Participants first engaged in a semi-structured interview for approximately 30 to 45 minutes. These interviews were conducted both in-person and over the phone by fellow research assistants and myself, using a set of pre-determined questions and discussion prompts. Each semi-structured interview was audio-recorded with the participants' permission, and was transcribed verbatim. After the interview ended, the participants were to complete a survey either on paper or online. Measures in the survey included *The Coping Scale*, the *Function Assessment Chronic Illness Therapy (FACIT-TS-G & FANLTC, Version 4)*, the *12-Item Short Form Health Survey*, the *Trait Forgivingness Scale*, *The Gratitude Questionnaire*, the *Brief Resilience Scale*, the *Adult Trait Hope Scale*, and the *Post Traumatic Growth Inventory*. Once the participants finished the survey, they were compensated \$20 each for their time and commitment. This study received IRB approval from the appropriate university (URIRB190701).

### **Qualitative Measures**

**Interview and focus group guide.** A guide composed of questions and discussion topics (see Appendix A) was developed to assess participants' self-perceptions of their use of a variety of strength-based attributes, including—but not limited to—gratitude, post-traumatic growth, and resilience. This personalized method helped us to investigate multiple unique experiences and their similarities across participants. Examples of questions asked included “In what ways has your life changed since the transplant?”, “Has your experience as a transplant recipient made more grateful in general? If so, how?”, “How did resilience help you get through the recovery from transplant?” and “Do you have a more positive outlook towards life? Towards opportunities, challenges, relationships? If so, can you tell me more about it?”.

### **Quantitative Measures**

Though the larger study assessed for many strength-based attributes, I decided to focus primarily on resilience, post-traumatic growth, and gratitude. Additionally, had the quantitative analysis been completed as planned, I would have more thoroughly investigated the results of the below measures.

**Resilience.** Participants' resilience, or ability to recover from stress, was assessed using the Brief Resilience Scale (BRS), which was developed by Smith et al. (2008). The BRS includes 6 items, such as “I tend to bounce back quickly after hard times” and “It is hard for me to snap back when something bad happens,” in which the participant indicates how much he/she agrees or disagrees with the statement using a 5-point Likert scale (for items 1, 3, and 5, 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, and 5 = Strongly Agree; the remaining items are reverse-scored, with 5 = Strongly Disagree, 4 = Disagree, 3 = Neutral, 2 = Agree, and 1 = Strongly Agree). The sum of each of the responses is calculated (ranging from 6-30) and is then divided by the number of items in the scale to give a final score. A higher score indicated a

higher level of resilience for each participant. Smith et al. (2008) reported a range of Cronbach  $\alpha$  scores, from 0.80 to 0.91. The full range of items in this scale can be viewed in Appendix B.

**Post-traumatic growth.** The proposed study will also utilize the Post Traumatic Growth Inventory (PTGI) to assess the degree to which participants perceive change in various aspects of their lives after a crisis or traumatic event (Baker et al., 2008). The PTGI contains 21 items that are scored on a 6-point Likert scale (0 = “I did not experience this change as a result of my crisis”, 1 = “I experienced this change to a very small degree as a result of my crisis,” 2 = “...to a small degree...,” 3 = “...to a moderate degree...,” 4 = “...to a great degree...,” and 5 = “...to a very great degree...”). Examples of these items include “I changed my priorities about what is important in life,” “I established a new path for my life,” and “I discovered that I’m stronger than I thought I was.” All responses are added together to provide a total score; a high score indicates a high level of post-traumatic growth. For this measure, Baker et al. (2008) reported a Cronbach  $\alpha$  of 0.90, and their test-retest reliability was 0.76. This measure in its entirety is located in Appendix C.

**Gratitude.** The proposed study will use the Gratitude Questionnaire (GQ-6) in order to assess one’s susceptibility to feel grateful in most situations (McCullough et al., 2002). The GQ-6 contains 6 items, each of which are rated by the participant on a 7-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Slightly Disagree, 4 = Neutral, 5 = Slightly Agree, 6 = Agree, and 7 = Strongly Agree). Items 3 and 6 are reverse-scored. Examples of the statements in each item include “I have so much in life to be thankful for,” and “I am grateful to a wide variety of people.” The overall score is composed of the average ratings across all six items. A high overall score indicates a high level of gratitude. McCullough et al. (2002) reported a Cronbach  $\alpha$  of 0.82 for this measure. The GQ-6 is located in Appendix D.

## **Data Analysis**

This study adhered to COREQ guidelines developed by Tong et al. (2007) as well as the recommendations made by Levitt et al. (2018). Recordings from each semi-structured interview were transcribed verbatim by one of the research assistants. Then, another research assistant edited each transcript to correct for any typing errors. Edited transcriptions from the interviews were uploaded to MAXQDA for coding and thematic analyses, which were completed by three research assistants and myself. We started with over seventy codes, but after some discussion and compromise, we ended up with approximately thirty-nine codes. These ultimately composed six themes and eighteen subthemes. Analyses of these themes followed the phenomenological framework. Overall intercoder reliability was found to be ~80%; further discussions to reach agreement were inhibited due to time constraints and COVID-19 interruptions. Analysis of the survey data would have been done using IBM SPSS, had the pandemic not interrupted quantitative data collection. Such analyses would have included means, standard deviations, chi-squares and correlations. Trustworthiness of the data was established through transcribing the interviews verbatim by one research assistant, and then editing the same transcripts by another.

## **Results**

### **Qualitative Data**

In the larger study, six themes were identified in advance: resilience, gratitude, post-traumatic growth, forgiveness, hope, and religion/spirituality. Evidence for all six themes are reported here, despite specific interest in the first three. Given the abundant evidence for the additional three themes in the interview responses, it seemed appropriate to represent these other coping strategies in addition to the three of interest. In this way, a more complete picture of the

participants' experiences could be illustrated for better understanding of the phenomenon of coping post-organ transplant.

### *Themes*

**Gratitude.** Within the main theme of gratitude, there emerged four subthemes during analysis. These include feeling gratitude towards (a) *Family, friends, and God*, (b) *Doctors and providers*, (c) *Donor(s)*, and (d) *Overall gratitude*. As the names for the subthemes suggest, most participants reported feeling grateful for specific individuals (family, friends, doctors, providers, and their donors) and for a higher power (God). Their overall feelings of gratitude were reported as well. Below are quotes from the participants that best illustrate each subtheme:

“[...] that’s who was here for me the whole time. If it wasn’t for them I wouldn’t be where I’m at now. They’ve always been here 110% pushing me, helping me, getting me back and forth to where I have to get to when I don’t have the strength to [...] Without my family and my friends I wouldn’t have made it this far on my own.” – Participant 1 (*Family, friends and God*)

“my doctors, my doctor and everything, all the staff that would explain stuff to me and explain it in a way that I can understand it.” – Participant 7 in response to a question asking about whom the participant was most grateful for (*Doctors and providers*)

“I feel gratitude towards my deceased donor, I feel sorry for the family’s loss, but I’m gonna tell you, the unselfishness of this person for being a donor helped with the health of so many other people including myself.” – Participant 3 (*Donor(s)*)

“I write down [...] things that I’m grateful for [...] I think that being grateful for even the small things in life, like sometimes I see a beautiful um sunrise or sunset, and you know, I put that in my journal you know, because it’s so beautiful.” – Participant 2 (*Overall gratitude*)

No subtheme was more prominent in terms of responses than the others. In addition to these subthemes, some participants reported feeling grateful for life in general, and for being able to experience another day.

**Resilience.** The different ways in which resilience was expressed by the participants were condensed into three subthemes: (a) *Transplant recovery*, (b) *Handling challenges*, and (c) *Health approaches*. *Transplant recovery* refers to how participants utilized resilience while they were in recovery post-transplant. Participants also reported how they were able to approach challenges in life (*Handling challenges*), as well as their own health (*Health approaches*).

Quotes reflecting these subthemes can be found below:

“I never gave up. I never let anybody try to knock me down.” – Participant 4 while describing the difficulties they faced during recovery from their organ transplant (*Transplant recovery*)

“I know that I didn’t go through this, for no reason. And I know that I have so much more stuff to do. So I’m going to try to live my life to the fullest.” – Participant 7 (*Handling challenges*)

“I said, ‘You’re not gonna tell me that. This is my body. I’m a number to you. But I’m a person to these people over here.’ You know, I matter.” – Participant 1 (*Health approaches*)

Most participants reported feeling resilient in terms of facing difficult situations (*Handling challenges*) and being proactive in terms of their health (*Health approaches*).

**Post-traumatic growth.** The major theme of post-traumatic growth was able to be broken into two subthemes, including (*a*) *Positivity*, which refers to one’s positive outlook on certain situations and in life, and (*b*) *New approaches*, which describes the new roles that participants took on and any personal changes they have faced. Most participants seemed to experience both of these subthemes almost equally. Some quotes from the participants are as follows:

“It was a battle but as long as you have that hope and that push of life of ‘I know it’s going to get better,’ it’s kind of like an existence thing. If you just keep saying it’s going to happen, then it’s going to happen. That’s the way I always looked at things. I’m going to get better. I knew I was going to get better. And I just kept saying that, even though I had times that it would kick me back, but that’s always a part in everything.” – Participant 3 (*Positivity*)



“I look at life as... as very precious.” – Participant 6 (*Positivity*)

“Yeah, my transplant changed me as a whole, enough for me to want to get involved and helping other people while they struggle. Because it's a lot easier for somebody to help a person through something when they've been through it.” – Participant 4 (*New approaches*)

“If I have the chance and if I can, I do it. I just look at, if I have the chance to do it I want to do it. I'm not going to put it off until tomorrow, I'm not going to say no. If it doesn't work then it don't work. If it does, it does. I'd rather take the chance of it working and it don't work than not to have taken the chance at all.” – Participant 3 (*New approaches*)

Each of the participants seemed to take on a positive perspective on life, despite the challenges they have faced in regards to the kidney transplant process. Some even found new aspects of their identities; Participant 1, for example, became a public speaker and advocate for organ transplantation awareness.

**Religion/Spirituality.** The major theme of religion/spirituality represents the experiences of participants in terms of their faith, especially as it relates to their perspectives of the transplant process. Within this theme, I identified three subthemes: *(a) Faith before transplant*, *(b) Faith after transplant*, and *(c) Faith in general*. The first two subthemes refer to one's use of faith as a coping strategy before and after transplant, while the third subtheme describes one's level of

faith in general, as well as whether one's faith had changed in some way. Some examples of each subtheme are illustrated in quotes from participants below:

“And I can't say I had that when my son died; it was that I had hope, but I was really pretty ticked at God at that time. But I wasn't about the kidney because if I didn't survive it, I was going to get to see my son a lot faster than I planned to. Now, God decided He wasn't finished with me yet down here!” – Participant 1 (*Faith before transplant*)

“I'm like, mom. I'm tired, I just wanna lay in bed and... she said, nope! Get up. Gods got you. He made you get this far, he gave you a whole lot, not so you can die, So you can live, and be an example to somebody else.” – Participant 7 (*Faith after transplant*)

“It's not that I don't believe in him less, but I don't believe in him more because I had total faith that God is always around so.” – Participant 8 (*Faith in general*)

For most participants, it seemed that their faith either became stronger or did not change at all after their kidney transplant. All participants reported a belief in a higher power, and most reported that this belief helped them cope.

**Hope.** Based on the provided responses, hope seemed to play a role in every participant's experience in some way. I found two subthemes that composed the overall theme of hope: (a) *Hope while waiting for transplant* and (b) *Hope overall*. As the names of the subthemes suggest,

the participants expressed that they felt most hopeful before their transplant and that their hopefulness in life strengthened as a result of their experiences. Below are a few quotes that reflect these subthemes:

“So... so hope was essential because you know, I hope and had faith that my day would come and you know, and that’s kind of what kept me going through all the hard times before the transplant, um that one day that would happen and you know and life would be much better again.” – Participant 2 (*Hope while waiting for transplant*)

“I was always saying to myself there’s got to be a way up, there’s going to be a better day, you know. It’s going to change, I’m going to be able to do this.” – Participant 3 (*Hope while waiting for transplant*)

“You know I just always have a lot of hope. I have a lot of faith that things are going to be the way they're supposed to be.” – Participant 1 (*Hope overall*)

“But I know I can get through that experience. So, I’m, you know, it definitely gives me hope for the future.” – Participant 8 (*Hope overall*)

There were two participants who did not necessarily feel hopeful during their experience. For example, Participant 5 did not report feeling hopeful, but rather tried to stay logical during the transplant process and recovery. This perspective seems unique, in that most participants in

this study appeared to view their experiences in a subjective light. Overall, though, most participants reported feeling hopeful at some point during their transplant experience.

**Forgiveness.** Many—but not all—participants reported feeling the need to forgive, whether it was towards themselves or towards others in their lives. Of these instances, four subthemes emerged from the data. These subthemes were (a) *Forgivingness in general*, (b) *Forgiving self*, (c) *Forgiving family and/or friends*, and (d) *Forgiving providers*. *Forgivingness in general* refers to one’s willingness to forgive oneself or others for any transgressions in general, whereas the remaining subthemes reflect one’s willingness to forgive specifically oneself, family or friends, or providers in regards to their transplant experience. The following quotes reflect each subtheme and the theme of forgiveness overall:

“I found that works out a lot better for all the way around and there’s no hard feelings, or you know bad feelings on either side you know.” – Participant 2  
(*Forgivingness in general*)

“Yes I have. I’m taking care of my body better.” – Participant 6 in response to whether or not the participant has forgiven themselves (*Forgiving self*)

“My mother died of kidney failure... and um it was just something that was going to happen. That’s how I feel. I don’t blame it on my mother.” – Participant 6  
(*Forgiving family and/or friends*)

“I didn’t like the way a couple of the doctors were talking to me. But other than that, I mean I know that it wasn’t meant to be personal.” – Participant 8 (*Forgiving providers*)

Again, not all participants reported feeling the need to forgive anyone, including themselves. But of those who did, it seemed that being able to forgive others and oneself was related to feelings of freedom and contentedness.

### **Quantitative Data**

As expressed previously, survey data was unobtainable due to interruptions caused by the COVID-19 pandemic. Therefore, no analyses were performed.

### **Discussion**

The present study aimed to examine the presence of strength-based attributes as coping strategies in kidney transplant recipients. As the results suggest, a total of six attributes were found to be useful in terms of coping for the participants in this study. These included the three strategies of interest—gratitude, resilience, and post-traumatic growth—as well as three others that the main study also investigated: religion/spirituality, hope, and forgiveness. The results tend to support the previous literature, in that kidney transplant recipients do in fact utilize these six strength-based attributes in order to cope with their conditions. While there are not enough data to support any relationships between the themes and participant outcomes, one can at least conclude that they carried meaning in the participants’ lives.

The results from the present study affirm those found in the previous literature. In terms of gratitude, my findings line up with Hill et al.’s (2013) in the sense that gratitude seems to correlate with better psychological health. Participants in the current study expressed feeling

gratitude in their lives, they were able to cope better with their condition. Similar to findings reported by Kamran and Ogden (2016), participants from both studies reported feeling thankful for their families, doctors and providers, and their kidney donors. Evidence of resilience being used as a coping method for kidney transplant recipients was in line with Tian et al.'s (2016) study, in which they found a negative relationship between psychological distress and resilience. Resilience, like gratitude, seemed to help participants cope with their transplant. The findings from the present study also support those of Kamran and Ogden (2016), who found evidence of positive growth and PTG in kidney transplant recipients. The results provided evidence of personal strength and growth emerging in participants as a result of their experiences. It is therefore safe to conclude that strength-based strategies—in particular gratitude, resilience, and PTG—seem to play a positive role in kidney transplant recipients' lives.

In addition to the three strategies of interest, hope, forgiveness and religion/spirituality were also discovered as effective coping methods for the participants in the present study. Duggal et al. (2016) found this to be true for hope which aligns with the findings from the present study. Many of the participants expressed feeling hopeful both pre- and post-transplant, suggesting that this is a helpful coping strategy for organ transplant recipients. In addition, forgiveness seemed to serve a role in the participants' recovery and changed perspective as well. This seems to be in line with Berry et al.'s (2005) finding that there is a positive relationship between forgiveness and one's health and well-being, as quite a few of participants indicated that by practicing forgiveness, they felt more at ease and were working harder to remain healthy post-transplant. Finally, the present study found abundant evidence of participants utilizing their religious faith as a coping strategy in their recovery. Ramirez et al. (2012) indicated that such religious coping was related to better psychosocial health and higher QoL. My findings seem to

support that claim, as many participants in the present study reported a reliance on their higher power, which helped them cope tremendously with the transplant process. So, in addition to gratitude, resilience, and PTG, kidney transplant recipients tend to experience hope, forgiveness, and religion/spirituality both before transplantation and after. The utilization of these coping methods illustrates the complexity of this phenomenon and the people it affects, and provides testimony to the idea that despite the challenges and hardships they face, organ transplant recipients are able to thrive and live a positive, healthy life.

Of course, this study was not without its limitations. First and foremost, the COVID-19 pandemic disrupted the data collection process and the performance of quantitative data analyses. For example, quite a few of the surveys were mailed to participants, who in turn may not have been able to return their responses. Therefore, no quantitative data was readily available to investigate further. In addition to the lack of quantitative data, the pandemic also affected the completion of previously scheduled interviews. Data collection was in progress when the pandemic occurred in the U. S., however the scheduled interviews were cancelled for health and safety reasons. Thus, it is worth noting that data saturation was not achieved as new information continued to be revealed from the analyzed data. Furthermore, only kidney transplant recipients were recruited which may have limited the possibility of having a complete understanding of how all solid organ transplant recipients (e.g., liver, lung and heart transplant recipients) engage with strength-based strategies. Despite these challenges, however, the present qualitative study adds to the literature that, at present, tends to reflect an abundance of quantitative methodology. This is due to the fact that personal experiences can add more richness and depth to other types of data, making the psychosocial experience of organ transplantation more understandable.

Future research should replicate this study as it was planned so that more data may be obtained on the subject to reach the point of data saturation. Thereby, increased confidence in the validity of the study findings would occur. Furthermore, quantitative data would have facilitated the use of different methodologies to better understand the strategies and coping outcomes of organ transplant recipients. It would be beneficial as well to perform this study with recipients of other organs, including lungs, heart, liver, pancreas, and so on. Comparing the experiences of these organ transplant recipients with kidney transplant recipients would be valuable in determining whether the same strength-based strategies are used universally post-transplant. Future studies should also conduct longitudinal studies in order to reveal whether or not the use of strength-based strategies changes over time.

One may apply the results from this study to a variety of settings, particularly to psychological interventions in this population of kidney transplant recipients. For those who may not already be equipped with gratitude, resilience, and post-traumatic growth, for instance, interventions designed with positive psychological concepts in mind may prove to be useful. For example, Rainer et al. (2010) emphasize the need for psychotherapy and social groups to build coping skills in these patients. One may utilize the results from the present study to inform such programs. Further, Tian et al. (2016) suggest that resilience can be learned or developed; this lends evidence to the idea that psychological interventions may prove useful in organ transplant recipients and other chronic illness patients. The findings also imply that with the right tools (i.e. strength-based strategies), kidney transplant recipients can thrive and live healthy lives. This implication may apply to other organ transplant recipients and those with chronic illnesses as well. As previous research and the present study suggest, gratitude, resilience, and PTG—among



other coping methods—appear to be useful across circumstances, and can help one achieve a higher QoL.

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## Appendix A.

**Interview and Focus Group Guide**

*Introduction (interview option):* Thank you for coming today/tonight to talk about your experiences as a transplant recipient. My name is [name], and I am a [position] at the University of Richmond. The purpose of this interview is to better understand the experiences of people who have received a kidney or liver transplant. I would like to hear about the different ways in which you coped with your recovery from your transplant. Please know that your opinions are appreciated and your honesty and personal experience is valued. With your permission I would like to record this interview, your identity and what you say will be kept confidential. Your name will not appear in the interview transcript or any summary reports. The interview will last about 30 minutes. Do you have any questions before we begin?  
This interview should last about 30-40 minutes.

Do I have your permission to record? (*Indicate that you are about to start recording.*)

*Introduction (focus group option):* Thank you all for coming today/tonight to talk about your experiences as a transplant recipient. My name is [name], and I am a [position] at the University of Richmond. Assisting me today is [co-moderator's name], [position]. Thank you for agreeing to participate in this study. The information you provide will be very useful in helping us better understand the experiences of people who have received a kidney or liver transplant.

*Focus group option:* To begin, I would like to give you an overview of how this focus group will work. As you know, the focus group will last for about 60 to 90 minutes. During this time period, I will ask you some questions about the ways in which you coped with your transplant. While I encourage you to draw on your experience, we do not need to know any specific details of your medical history. The goal is for you to discuss the questions as a group. The most important information will come from the range of everyone's thoughts and ideas. It is very important that everyone speaks their mind and participates, particularly if you have a different perspective from others in the group. There are no "right" or "wrong" answers to the questions. We are interested in the full range of perspectives. My role is to help facilitate the discussion of this topic. I may ask specific individuals about their thoughts or ideas if they have not had a chance to participate very much in the discussion. I also may have to interrupt someone to ask that we get everyone's opinion or to move on to another topic. This is to ensure that we get everyone's views on all the questions in the relatively short time we have together. Another important ground rule for this meeting is that we will respect the privacy of all group members and keep the content of our discussion confidential. We will call each other only by first names or pseudonyms, and your verbal and written comments will be kept strictly confidential. I will be audiotaping the discussion, and you may see me taking notes. These steps are necessary for us to accurately record what is said today/tonight, but we will not include any information that will personally identify you in our notes or recordings. At any point in time, you are free to stop participating in the discussion or even leave. When we analyze our notes from this discussion, we will be most interested in what the group as a whole has to say. After we complete the analysis, we will erase and throw away the tape recording. When we publish the results of our study, no individuals will be identified. Finally, please remember that located on your consent form are the names and

numbers of people you can call in future if you have questions about your rights as a research participant. Does anyone have any questions? [Answer any questions]

**Opening Questions:**

1. What made you interested in participating in this study?

**[Probe:**

- a. *Are you interested in the topic?*
- b. *Are you hoping your participation will help others?]*

**Topic 1: Initial experience with transplant**

2. Could you tell me a little about how you came to know you needed a transplant?

**[Probe:**

- a. *When were you diagnosed with kidney failure/ liver failure?*
- b. *What did your doctors say to you?*
- c. *When did you get the transplant?*
- d. *How do you feel about the outcome of your treatment (i.e. the transplant surgery and aftercare)? Were you satisfied with the outcome of your transplant? Were you disappointed? What could have been done differently (e.g., by doctors, nurses, health care providers)?*

**Topic 2: Changes in health post-transplant**

3. In what ways has your life changed since the transplant? **[Probe:**

- a. *In what ways has your life become better (or worse)?*
- b. *How has the transplant affected your ability to perform your daily tasks? For example, has your energy level increased? How has your ability to perform physical activities changed after the transplant?*
- c. *Are you able to return to work? Are you able to interact with your friends and family better? Is it easier to travel? Is it easier to keep up with your children (if applicable)*

**Topic 3: Coping**

4. Can you tell me how you coped with the recovery from your transplant?

**[Probe:**

- a. *Can you describe some of the things that made it hard or difficult to cope?*
- b. *What was most difficult about life after post transplant?*
- c. *How did you feel after your transplant? (for example, sad, angry, happy, relieved)*
- d. *What are some examples of things you did to help you cope?*
- e. *How did your family help you cope?*
- f. *How did your friends help you cope?*
- g. *How did the nurses, doctors, social workers and other providers help you cope?]*

**Topic 4: Hope**

5. Sometimes when people are going through a difficult time, especially with an illness, they say having hope helps them get through. In what ways has hope played a role in your experience as a transplant recipient?

**[Probe:**

- a. *How did having hope help you while you were waiting for transplant?*
- b. *How did having hope help you get through the recovery?*
- c. *Has your experience as a transplant recipient made you more hopeful in life? If so, how?]*

**Topic 5: Spirituality**

6. Sometimes when people are going through a difficult time, especially with an illness, they say their religion and belief in a higher power (e.g. God, Allah, Buddha) or spirituality helps them get through the difficult time. In what ways has your faith, religion or spirituality played a role in your experience as a transplant recipient?

**[Probe:**

- a. *In what ways did your religion or spirituality help you while you were waiting for transplant?*
- b. *In what ways did your religion or spirituality help you get through the recovery?*
- d. *Has your experience as a transplant recipient made you more religious or spiritual? (i.e. made you a stronger believer, made you more involved in church, mosque or synagogue activities) If so, how?]*

**Topic 6: Gratitude**

7. Some people say that being thankful for every day, or for their family and friends helps them, especially when they are going through a difficult time. What role has gratitude or being thankful played in your experience as a transplant recipient?

**[Probe:**

- a. *How did gratitude help you while you were waiting for transplant?*
- b. *How did gratitude help you get through the recovery from transplant?*
- c. *In what ways did you feel grateful to your friends and family for helping you throughout your illness and transplant? What about God, Allah..?*
- d. *In what ways did you feel grateful for your providers (e.g., doctors, nurses)? Is there one or two people you are particularly grateful for?*
- e. *Did you feel gratitude towards your donor? If so, can you please explain?*
- f. *Has your experience as a transplant recipient made more grateful in general? If so, how?]*



**Topic 7: Forgiveness**

8. What role did forgiveness play in your experience as a transplant recipient?

**[Probe:**

- a. *Throughout your experience as a patient and with the transplant process, did anyone do anything to hurt you? If so, can you tell me more about it?*
- b. *Did you have to forgive yourself for anything related to your illness? If so, can you tell me more about it?*
- c. *Did you have to forgive your relatives or friends for something they did related to your illness? If so, can you tell me more about it?*
- d. *Did you have to forgive your providers (e.g. doctors, nurses, social workers) for anything they did related to your illness? If so, can you tell me more about it?*
- e. *Has your experience as a transplant recipient made more forgiving in general? If so, how?]*

**Topic 8: Resilience**

9. Sometimes when people are going through a difficult time, especially with an illness, they say it makes them resilient (i.e., they are able to deal with problems better and overcome difficulties). In what ways has resilience played a role in your experience as a transplant recipient?

**[Probe:**

- a. *How did resilience help you while you were waiting for transplant?*
- b. *How did resilience help you get through the recovery from transplant?*
- c. *Can you tell me how your ability to overcome difficult situations has changed? How has your experience as a transplant recipient changed the way you approach other difficult situations? Do you have a more positive outlook towards when faced with problems?*
- d. *How has your resilience affected the way you approach your health (for example, take your medications, attend doctor's appointment)? Are you more likely to take your medications as prescribed, attend your doctor's appointments, do what your doctor/nurse say?*

**Topic 9: Post Traumatic Growth**

10. Sometimes when people experience a really difficult period in their life, they say it changes the way they approach life. Some people say they've become stronger because of their transplant experience. How has your experience as a transplant recipient changed you as a whole?

**[Probe:**

- a. *Do you have a more positive outlook towards life? Towards opportunities, challenges, relationships? If so, can you tell me more about it?*
- b. *Are you more likely to take on challenges head on than you did before the transplant? If so, can you tell me more about it?*

**Closing question:** We've discussed several things related to your experience as a transplant recipient. Is there anything we haven't talked about that you would like to discuss?

**Closing script:**

Option 1: *Time Still Remaining:* Before we end the session, are there any other comments that you have or topics that we missed in our discussion? Thank you for your time and participation.

Option 2: *Time is Up:* If, after today's session, you think of any other comments or topics that were missed please contact me, [Research personnel name], at [email address or (804) 662-3224], or my supervisor, Dr. Camilla Nonterah, at [cnonterah@richmond.edu](mailto:cnonterah@richmond.edu) or (804) 289 8128. Thank you for your time and participation.

\*If you are interested in receiving a copy of the results of the study in the future, please let me know so that I can send it to you.

Appendix B.

**Brief Resilience Scale**

Smith et al., 2008

Directions: Below is a set of statements that aims to assess a person’s ability to bounce back or recover from stress. **Please mark a box per line** to indicate how strongly you agree or disagree with the statements.

*Note: Some of the questions are worded in a positive way while others are worded in a negative way. Hence, the order of the numbers change depending on the way in which the question is worded.*

<b>Please respond to each item by marking <u>one box per row</u></b>		<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>
<b>B R S 1</b>	I tend to bounce back quickly after hard times	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>B R S 2</b>	I have a hard time making it through stressful events.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
<b>B R S 3</b>	It does not take me long to recover from a stressful event.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>B R S 4</b>	It is hard for me to snap back when something bad happens.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1
<b>B R S 5</b>	I usually come through difficult times with little trouble.	<input type="checkbox"/> 1	<input type="checkbox"/> 2	<input type="checkbox"/> 3	<input type="checkbox"/> 4	<input type="checkbox"/> 5
<b>B R S 6</b>	I tend to take a long time to get over set-backs in my life.	<input type="checkbox"/> 5	<input type="checkbox"/> 4	<input type="checkbox"/> 3	<input type="checkbox"/> 2	<input type="checkbox"/> 1

Appendix C.

**Post Traumatic Growth Inventory**

Baker et al., 2008

Directions: Below is a set of statements that assess the changes which have occurred in your life as a result of your disease. Please answer the questions below indicate how strongly you disagree or agree with each of the following statements

- 0 = I did not experience this change as a result of my crisis.
- 1 = I experienced this change to a very small degree as a result of my crisis.
- 2 = I experienced this change to a small degree as a result of my crisis.
- 3 = I experienced this change to a moderate degree as a result of my crisis.
- 4 = I experienced this change to a great degree as a result of my crisis.
- 5 = I experienced this change to a very great degree as a result of my crisis.

- \_\_\_\_\_ 1. I changed my priorities about what is important in life.
- \_\_\_\_\_ 2. I have a greater appreciation for the value of my own life.
- \_\_\_\_\_ 3. I developed new interests.
- \_\_\_\_\_ 4. I have a greater feeling of self-reliance.
- \_\_\_\_\_ 5. I have a better understanding of spiritual matters.
- \_\_\_\_\_ 6. I more clearly see that I can count on people in times of trouble.
- \_\_\_\_\_ 7. I established a new path for my life.
- \_\_\_\_\_ 8. I have a greater sense of closeness with others.
- \_\_\_\_\_ 9. I am more willing to express my emotions.
- \_\_\_\_\_ 10. I know better that I can handle difficulties.
- \_\_\_\_\_ 11. I am able to do better things with my life.
- \_\_\_\_\_ 12. I am better able to accept the way things work out.
- \_\_\_\_\_ 13. I can better appreciate each day.
- \_\_\_\_\_ 14. New opportunities are available which would not have been otherwise.
- \_\_\_\_\_ 15. I have more compassion for others.
- \_\_\_\_\_ 16. I put more effort into my relationships.
- \_\_\_\_\_ 17. I am more likely to try to change things which need changing.
- \_\_\_\_\_ 18. I have a stronger religious faith.
- \_\_\_\_\_ 19. I discovered that I'm stronger than I thought I was.
- \_\_\_\_\_ 20. I learned a great deal about how wonderful people are.
- \_\_\_\_\_ 21. I better accept needing others.

## Appendix D.

**The Gratitude Questionnaire (GQ-6)**

McCullough et al., 2002

Directions: Below is a set of statements that assess an individual's proneness to experience gratitude in life. Please answer the questions below indicate how strongly you disagree or agree with each of the following statements

- 7 = Strongly Agree
- 6 = Agree
- 5 = Slightly Agree
- 4 = Neutral
- 3 = Slightly Disagree
- 2 = Disagree
- 1 = Strongly Disagree

- \_\_\_\_\_1. I have so much in life to be thankful for.
- \_\_\_\_\_2. If I had to list everything that I felt grateful for, it would be a very long list.
- \_\_\_\_\_3. When I look at the world, I don't see much to be grateful for.
- \_\_\_\_\_4. I am grateful to a wide variety of people.
- \_\_\_\_\_5. As I get older I find myself more able to appreciate the people, events, and situations that have been part of my life history.
- \_\_\_\_\_6. Long amounts of time can go by before I feel grateful to something or someone.

Appendix E.

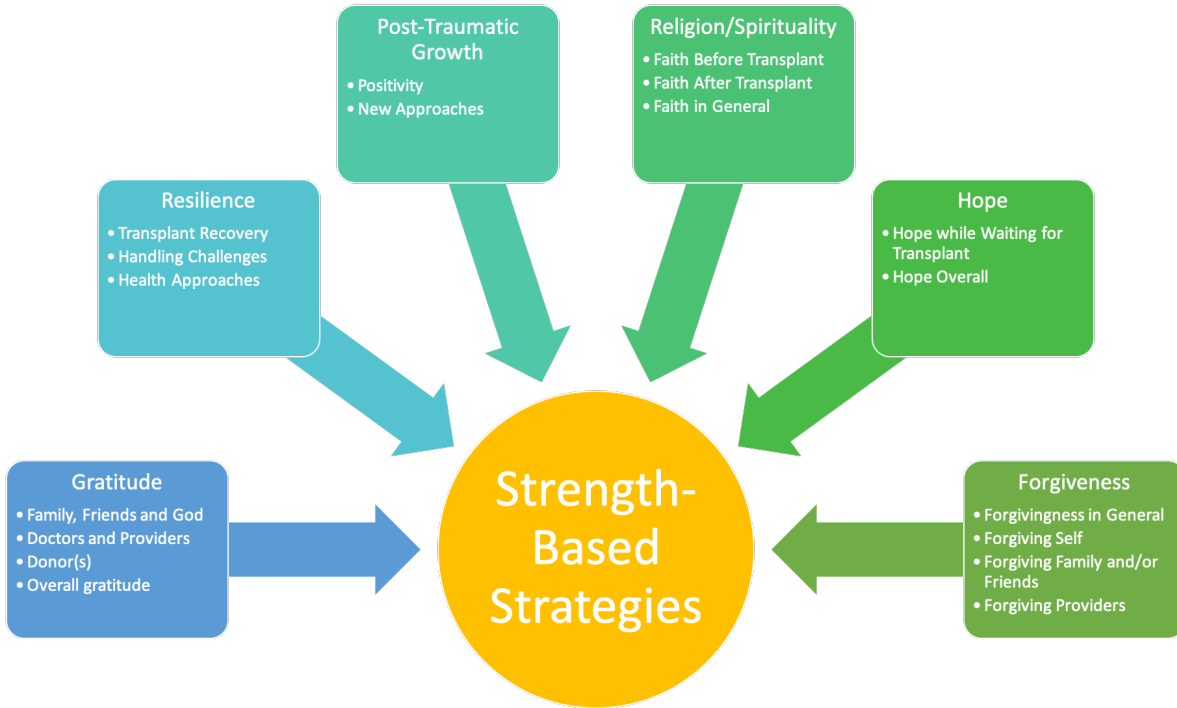


Figure 1. Diagram illustrating the themes and subthemes found in the present study.