

# An examination of adult attachment and liver transplant outcomes

## Abstract

The purpose of this retrospective, quantitative, secondary data analysis pilot study was to examine if a relationship exists between adult attachment and liver transplant outcomes. A medical record review with a sample size of 20 was utilized for a period of six months post-transplant to analyze relationship occurrences among pre-transplant psychosocial evaluation, pre-transplant attachment scale scores and post-transplant outcomes. As an exploratory study with a small sample size, it is unsurprising that the analysis did not reveal any statistical significance, but the results suggest some possible trends that would be interesting to explore further with a larger sample size. The results support two findings: (a) all patients transplanted had scores that supported secure attachment. (b) Negative outcome markers experienced post-transplant by the patients in this study were relatively short-lived and manageable and did not have a long-term negative impact on the patient's health and recovery. It is possible that secure attachment may have contributed to better outcomes and outcomes may be attributed to a brief disruption in secure attachment during the most difficult time of transplant recovery, followed by a return to a more secure attachment as a patient's body and psyche heals and recovers.

**Keywords:** liver transplant, attachment, psychosocial evaluation, social work, adherence, depression

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## Introduction

Despite thorough psychosocial evaluations, there are instances where patients, unexpectedly, do not thrive and struggle to adhere to a medical regimen post-transplant. These patients often struggle with motivation needed for post-surgery medical adherence as well as psychiatric symptoms.<sup>1,2</sup> Many such patients also struggle with receiving/accepting help and assistance from their support person(s) and their transplant team (including doctors, nurses, social workers and other providers).

“Over the past 25years, attachment research has extended beyond infant-parent bonds to examine dyadic relationships in children, adolescents and adults. Attachment has been shown to influence a wide variety of biopsychosocial phenomena, including social functioning, coping, stress response, psychological well-being, health behavior, and morbidity, and has thus emerged as an important focus of psychosomatic research”.<sup>3</sup> However, specific research has not yet been conducted to see if a relationship exists between adult attachment and transplant outcomes. It is possible that a patient's lack of motivation, struggle with adherence and/or experience of psychiatric symptoms post-transplant could be (at least in part) a manifestation of insecure adult attachment. Research has shown that people who show a tendency for insecurity on an adult attachment scale have been more likely to have links to depressive and anxiety symptoms, negative affectivity, and periods of distress.<sup>3</sup>

The purpose of this retrospective, secondary data analysis pilot study was to see if a relationship exists between adult attachment and liver transplant outcomes for patients at a liver transplant center in a major urban city in Pennsylvania. A patient's capacity to successfully recover from transplant surgery was generally defined as the patient's ability to comply with medical treatment (including post-surgery clinic visits, medication adherence and other medical recommendations),

appropriately utilize support (including their primary support person and team of transplant professionals), avoid significant psychiatric symptoms, avoid substance use and avoid rejection of the transplanted liver.<sup>4</sup> An Adult Attachment Scale<sup>5,6</sup> was administered as part of the pre-transplant psychosocial evaluation. Transplant outcomes were analyzed with regards to attachment scale scores.

## Methods

A quantitative retrospective pilot study looking at adult attachment and post-transplant surgery outcomes was conducted using a secondary data analysis method. The study was conducted at one transplant center. An Adult Attachment Scale was administered as part of the per-transplant psychosocial evaluation to measure secure vs. insecure attachment. A secondary analysis was conducted through a retrospective medical record review using a convenience sample of 20 that included all study-eligible patients who received liver transplants between January 1, 2015 and April 16, 2016. Data from that time period was measured against post-liver transplant outcome data from patients transplanted at the same transplant center in 2013-2014(N=40). A measure of association was conducted to see if a relationship exists between the independent variable (attachment style) and the dependent variable (transplant outcomes).

## Conclusion

Results supported that all patients included in this study reported overall secure attachment. However, results from this study showed that nine of the 20patients (45%) included in this study (transplanted between January 2015 and May 2016) fell into the negative outcomes category post-transplant. However, it is important to note that to qualify for the negative outcomes category, patients needed to have a period where they struggled in at least one of these five categories:<sup>7</sup> difficulty with treatment adherence,<sup>5</sup> unstable psychosocial support<sup>6</sup>

substance abuse recidivism,<sup>8</sup> development or relapse of psychiatric problems, or<sup>4</sup> graft failure. It is pertinent to highlight that, when struggles did occur post-transplant with patients included in this study, they did not last the duration of six months (or longer) as was seen in 2013-2014. Instead, the range of the duration of the problem lasted from three weeks to 12weeks (3months), which is a relatively brief period of struggle.

This study found that the psychiatric symptoms experienced and the non-adherence that occurred post-transplant were relatively short-lived and manageable; although not ideal, the psychiatric symptoms and non-adherence did not have a long-term negative impact on the patient's health and recovery.

In addition to concerns of graft loss, medical non-adherent patients are often labeled high-risk and they require more attention, care and guidance.<sup>7</sup> Although some non-adherence was noted with patients in this study, the range was brief (a maximum of 12weeks). Time spent on outpatient visits and the number of outpatient interactions by the physicians, nurses or social worker was not significantly higher. This is atypical because patient struggle usually results in more time spent on patient interventions. In this study, while non-adherence did occur, interventions were successful (i.e., there were no graft failures) and the non-adherence occurred at a shorter duration.

Transplant surgery recovery is a major life disruption, even though it eventually can lead to improved health, improved quality of life and improved mood. Recovery often involves feelings of vulnerability, being faced with mortality, a reliance on loved ones, a reliance on transplant medical providers, coping with the unknown, not to mention physical pain and discomfort. It is in these times that attachment may feel less secure for a time. However, the fact those patients were able to respond to interventions and persist past the negative outcome indicators after a relatively brief period may speak to the patients' overall secure attachment.

Secure attachment lends to a sense of security that allows people to cope with problems and adapt to unfamiliar situations. Secure attachment leads to greater self-esteem, emotional health, ego resilience, positive effect, initiative and social competence.<sup>9,10</sup> These factors may have influenced the patients' ability to cope and be successful post-transplant. A post-transplant patient must have the ability to adapt to unfamiliar situations. Perhaps some of the short-term depression, non-adherence, or substance relapse was part of the adaptation or adjustment to the new, post-transplant circumstance. The fact that all instances were short-term is more indicative of secure attachment, for struggle is a normal human condition, but to overcome and adapt to the struggle often requires a secure attachment and a strong sense of self.

One's attachment style is not necessarily a constant but exists on a continuum. People can have different kinds of attachments to different people at different times and a primary attachment style with elements of others. Disruptions of feelings of safety and stability can impact a human's attachment to another in a given period of time. "As Bowlby mentions, experiences of attachment and/or its disruption are prone to evoke the most intense of feelings. Thus, our representations of ourselves, of others, and of relationships do not merely have a powerful emotional component; they are in most cases dominated, outside awareness, by emotions that underpin them".<sup>10</sup> If transplant surgery is understood as a disruption that impacts secure feelings of safety and stability, we can better understand that difficulties faced by patients post-transplant may manifest in one of the negative outcome categories.

Consider the following statement: It is largely the unconscious emotional dimension of our inner representations that renders them resistant to revision. If, for example, we learned through our formative interactions that being close to others was risky, then defenses will have been instituted to keep us unaware of our need for closeness; we simply won't be motivated to make the bids for closeness that, if successful, might update our old (avoidant) model of attachment to a more secure one. Likewise, because emotions have bodily signals to others as well as to our selves, the expectation that our overtures will be rejected may well result in feelings of fear or anger, the unconscious bodily expression of which provokes the very rejection our working model has led us to expect. As both Bowlby and Main emphasize, working models-especially insecure ones-tend to have a self-perpetuating quality.<sup>10</sup>

It is possible that vulnerability of health and psyche post-transplant impacted the outcomes in an unconscious manner, resulting in a temporary period of avoidant and/or anxious attachment that manifested through one (or more) of the five negative outcome categories. It is also possible that patients were able to recuperate because of overall secure attachment. This may, at least in part, account for the greater length of hospital stay post-transplant for patients who experienced negative outcomes and the event that even these patients experienced a departure in the negative post-transplant measures by a maximum of 12weeks.

Alternatively, this quote may instead support the notion that some patients who reported secure attachment pre-transplant struggled post-transplant when defenses were triggered. It may be that improvement in negative outcome categories was more a result of the typical recovery from transplant accompanied by reduced vulnerability rather than constant secure attachment. In other words, as the pain subsided, and transplant recovery felt less overwhelming, a patient might have returned to a more secure state of attachment. John Hopkins Medical Center's website states, "The average post liver transplant hospital stay is 10-12days, with two of those days spent in the intensive care unit. It may be up to three months before patients feel normal" ([www.hopkinsmedicine.org/transplant/programs/liver/#surgery](http://www.hopkinsmedicine.org/transplant/programs/liver/#surgery), 2017). Patients in this study all had negative outcome struggles subside within a three month period, right around the longer duration of time where John Hopkins Medical Center expect a patient to feel "normal." Perhaps once a patient is in the typical timeframe where "feeling normal" occurs, a patient may be more able to return to feeling more securely attached. It is possible that secure attachment may have contributed to better outcomes and outcomes may be attributed to a brief disruption in secure attachment during the most difficult time of transplant recovery, followed by a return to a more secure attachment as a patient's body and psyche heals and recovers.

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## Conflict of interest

Author declares that there is no conflict of interest.

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