



# Does Family Satisfaction Following TBI Predict Life Satisfaction Trajectories?



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## Introduction

Recent research on the trajectories of life satisfaction indicated that functional independence significantly predicts life satisfaction over time following TBI. While life satisfaction decreased in general over time, it actually increased in individuals with high functional independence (Resch et al., 2009).

Since TBI affects not only the individual but the family system as well, it is important to understand the effects of TBI in relation to family satisfaction and marital status and the impact on life satisfaction.

This study examined the trajectories for life satisfaction over five years following a traumatic brain as they varied by functional impairment and family satisfaction within the context of gender and marital status.

## Methodology

### Participants

Participants were part of a larger longitudinal study conducted by the Injury Control Research Center of the University of Alabama at Birmingham. A total of 609 individuals (435 men, 174 women) with TBI consented to participate in the study. The mean age of participants was 38.31 years (SD = 18.00 years), but there was a significant difference in the mean ages of men and women at time of injury (men = 35 years, women = 44 years;  $p < .001$ ). A majority of the participants were Caucasian ( $n = 436$ ; 71.6%); 27.6% of the sample identified as African American ( $n = 168$ ). Participants were interviewed by telephone at 12, 24, 48 and 60 post-discharge.

### Design and Analysis

Data were collected on a myriad of outcome areas using several measures, but this particular study was interested in the Family Satisfaction Scale (FSS), Functional Independence Measure (FIM), and the Life Satisfaction Index (LSI). We used hierarchical linear modeling (HLM) to examine how family satisfaction, functional independence and marital status influence the trajectory of life satisfaction over a five year period following TBI.

## Results

With all participants, family satisfaction significantly predicted life satisfaction individually ( $\beta_{20} = .209, p = .000$ ), over time ( $\beta_{50} = -.021, p = .011$ ), and as an interaction with functional independence both individually ( $\beta_{60} = -.023, p = .005$ ) and across time ( $\beta_{70} = .007, p = .005$ ). Results for men replicated these findings. Women showed differential results with only family satisfaction predicting life satisfaction ( $\beta_{20} = .151, p = .001$ ). Results for married participants replicated the findings of the overall group. However, in unmarried

participants, family satisfaction significantly predicted life satisfaction only individually ( $\beta_{20} = .193, p = .000$ ), and as an interaction with functional independence ( $\beta_{60} = -.021, p = .000$ ).

All groups with high functional independence and high family satisfaction increased in life satisfaction over time. High family satisfaction was predictive of greater life satisfaction across all groups reporting high functional independence.

Table 1. Stability of Marital Status and Single over Measurement Occasions

	Married	Single (Unmarried)
At all measurement occasions	106	76
At first three measurement occasions	30	20
At first two measurement occasions	27	37
Initial measurement occasion only	25	28

\*Note: Table does not reflect participants who reported "divorced" at each assessment (N=17), "widowed" at each assessment (N=17), unknown or missing data at each assessment (N=22), or others who varied within the categories (N= 405).

Table 2. Injury Severity of All Participants

JHAIS Injury Severity Code	Frequency	Percent
1	1	.20
2	198	32.70
3	237	39.10
4	138	22.80
5	32	5.30
Total	606	100.00

Figure 1. Interaction of FIM, Family Satisfaction, and LSI for All Participants

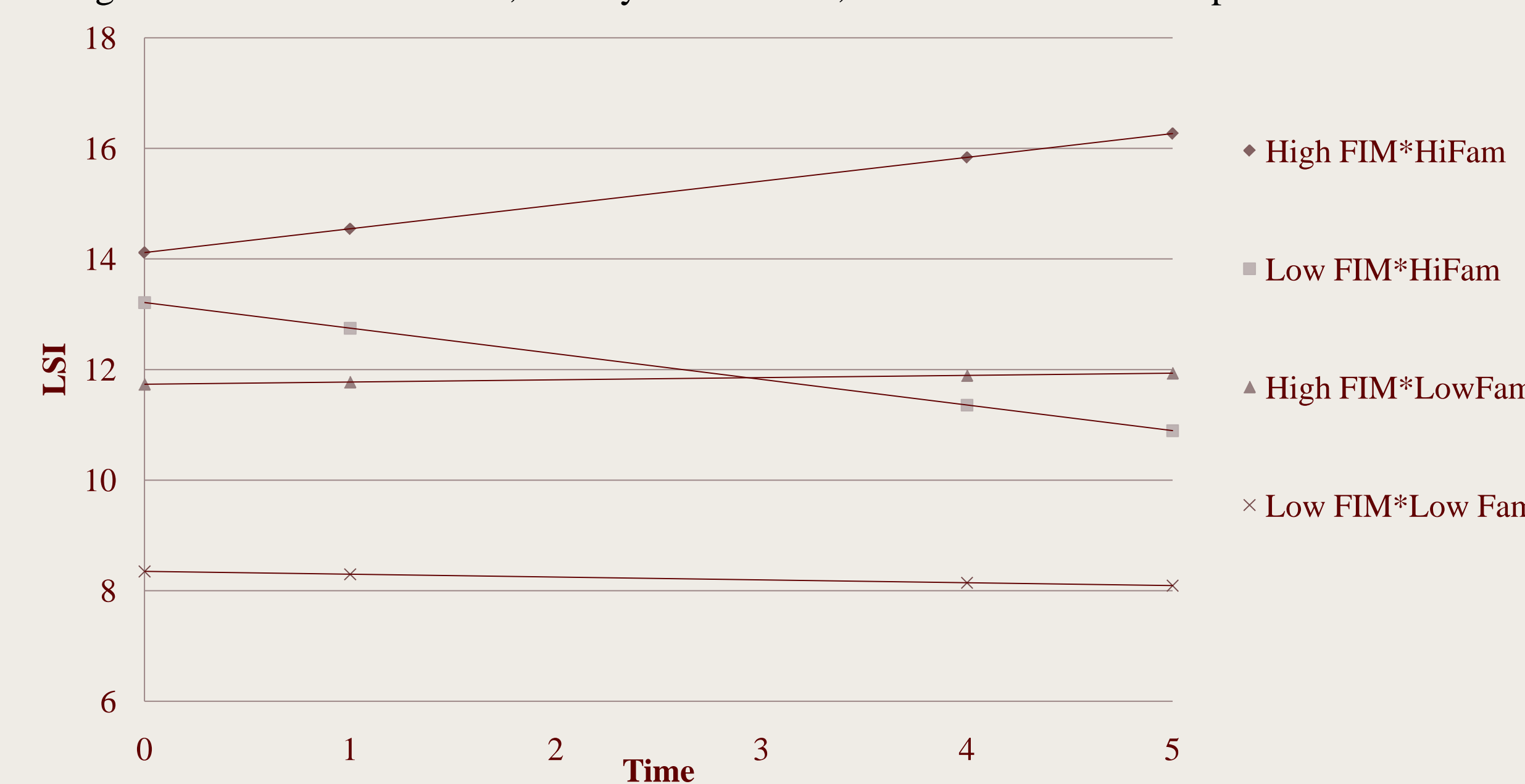


Figure 2. Interaction of FIM, Family Satisfaction, and LSI for Female Participants

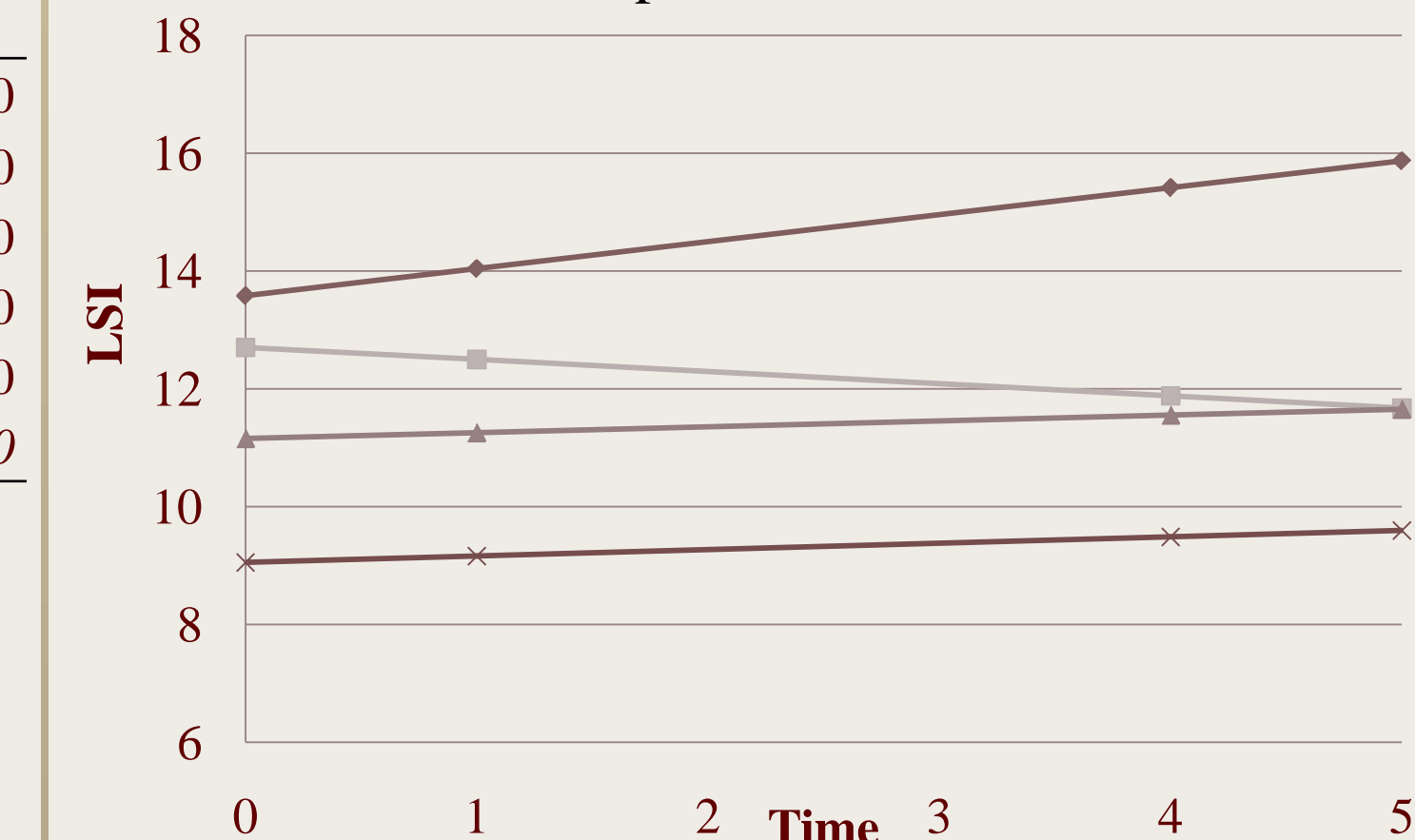


Figure 4. Interaction of FIM, Family Satisfaction, and LSI for Married Participants

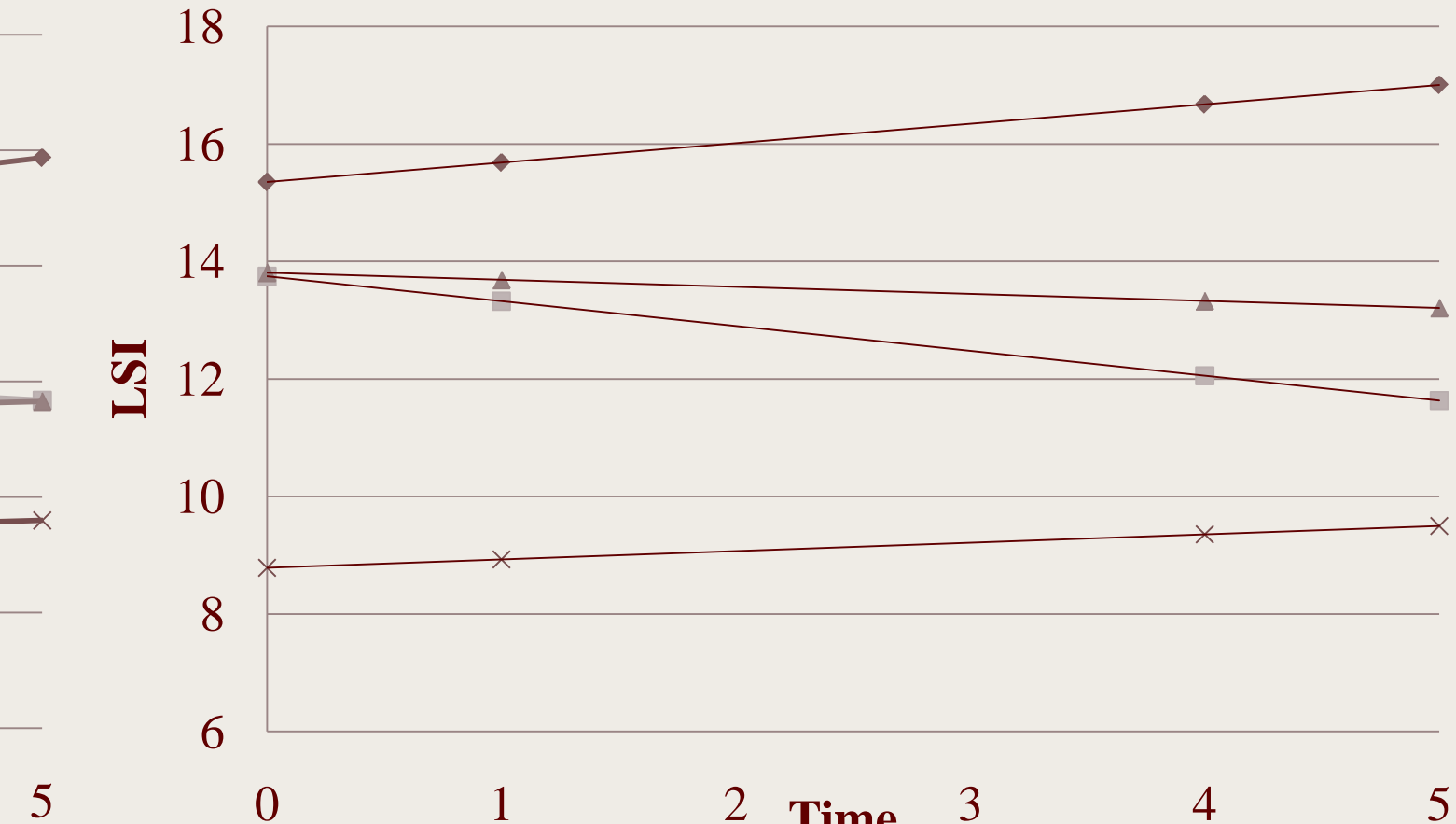


Figure 3. Interaction of FIM, Family Satisfaction, and LSI for Male Participants

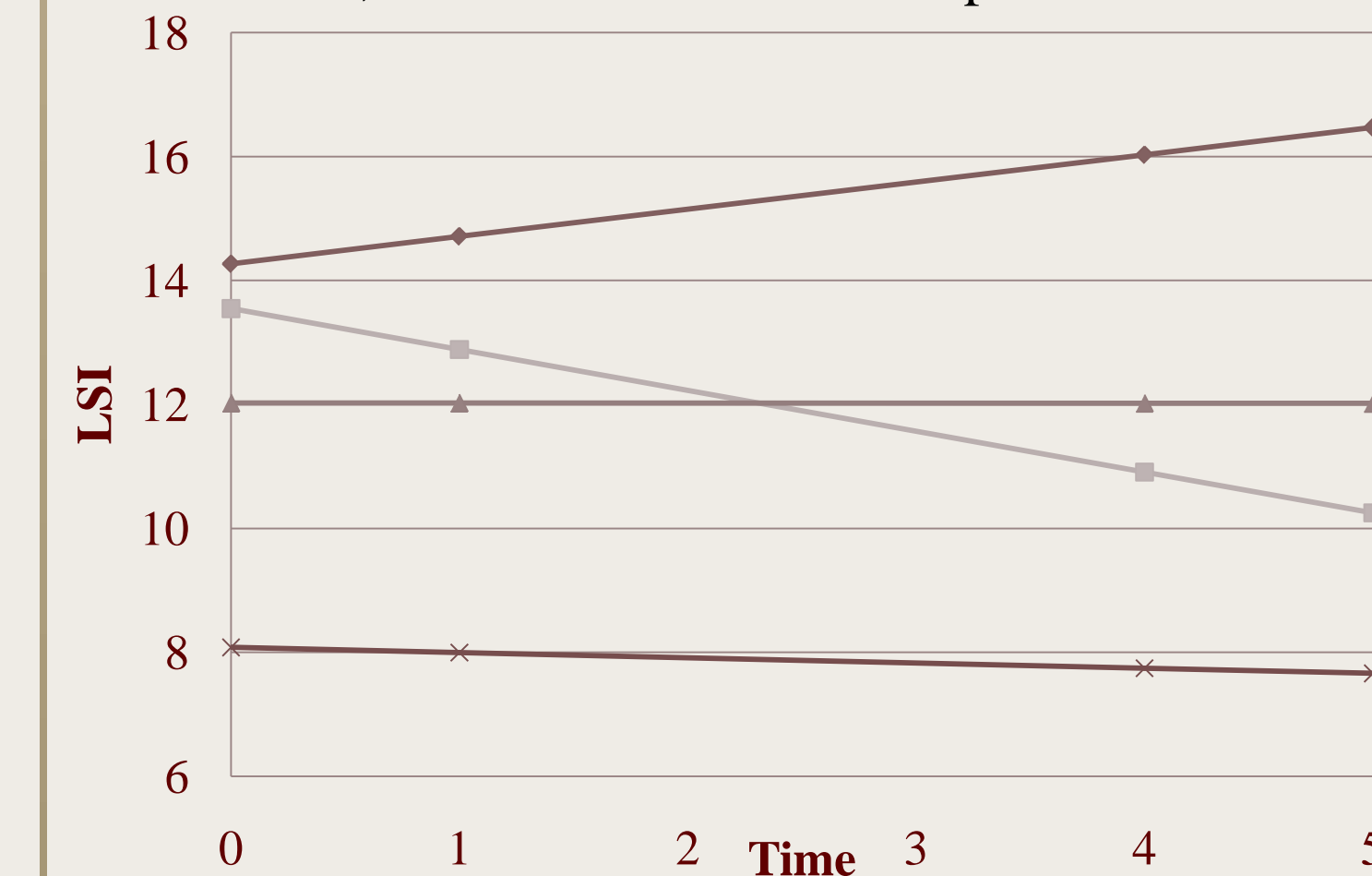
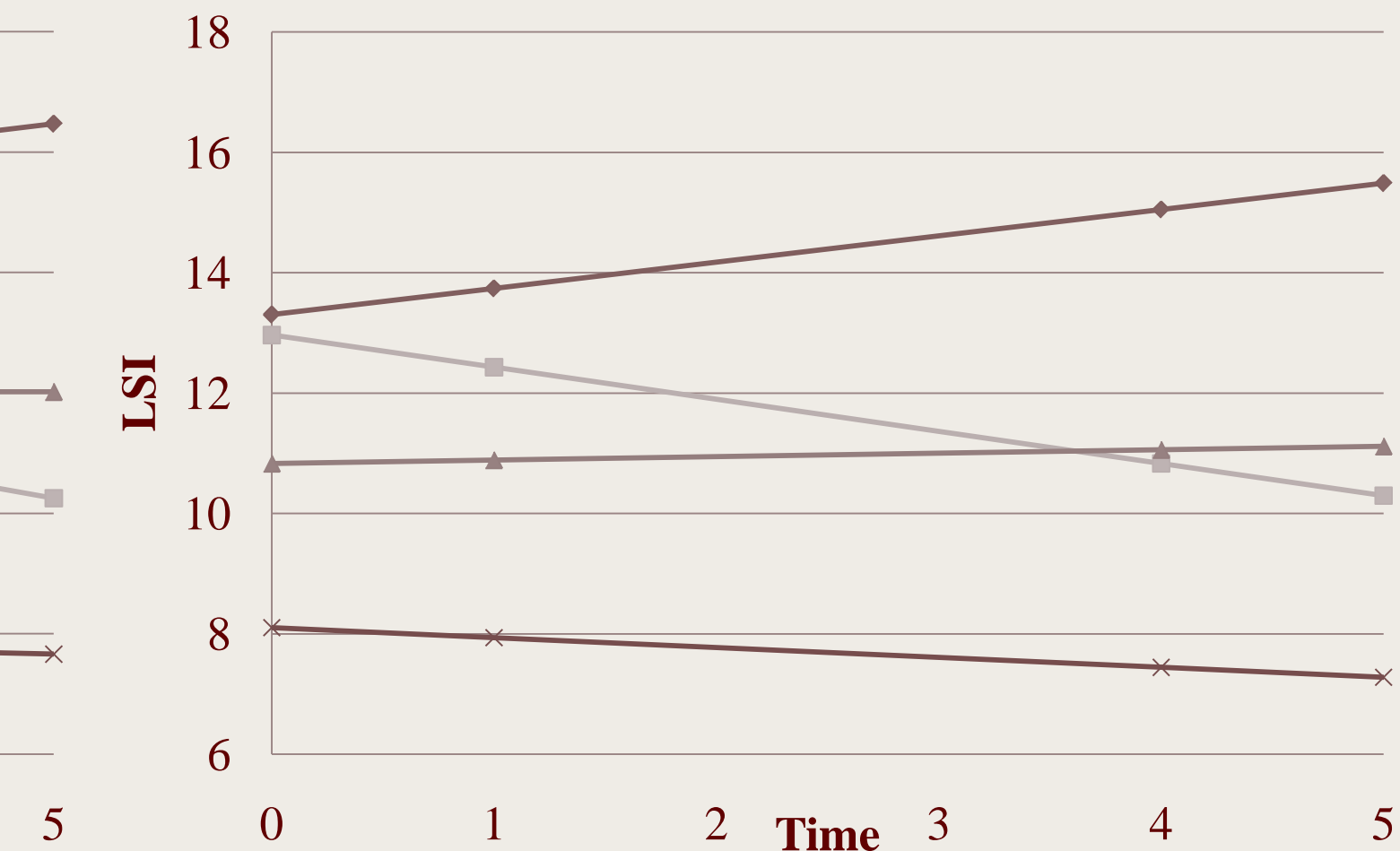


Figure 5. Interaction of FIM, Family Satisfaction, and LSI for Unmarried Participants



## Discussion

While trajectories of life satisfaction remained similar across groups for individuals with high functional independence, marked differences occurred in individuals with low functional independence, regardless of family satisfaction. High family satisfaction was associated with greater life satisfaction following TBI in individuals with high functional independence. However, this effect is markedly decreased in men with low functional independence. This strength in decrease is not seen in women.

These data attest to the need for different interventions by gender if functional independence is severely impaired. Across participants with low functional independence and low family satisfaction, being female or being married appeared to be a significant buffer against the general decrease in life satisfaction. Individuals with low functional independence and their families need continuous support following TBI regardless of reported levels of family satisfaction.