

Trajectories of Motivational Change Across the First Semester of College

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Background

- Approximately 30% of students who begin college in the U.S. drop out before their sophomore year¹. While academic motivation predicts dropout and college success², little is known about its development during college.
- Research has found that college students' motivation likely becomes more adaptive following the transition from high school to college^{3,4}. However, this longitudinal work has neglected to examine change *within the first semester* as students are adjusting to new lifestyles and academic experiences.
- Using Self-Determination Theory⁵, the present study examined trajectories of change in *autonomous motivation*, *controlled motivation*, and *amotivation* over the first semester of college.
- In addition to documenting the *average trajectory* of change across the sample, we identified *subgroups with distinct trajectories* of change for each motive type. Subgroups were then compared on a set of academic correlates.

Research Questions

- What trajectories of motivational change do students exhibit over the first semester of college?
- How do these patterns of change relate to academic outcomes (i.e. leaves, GPA)?

Method

Participants

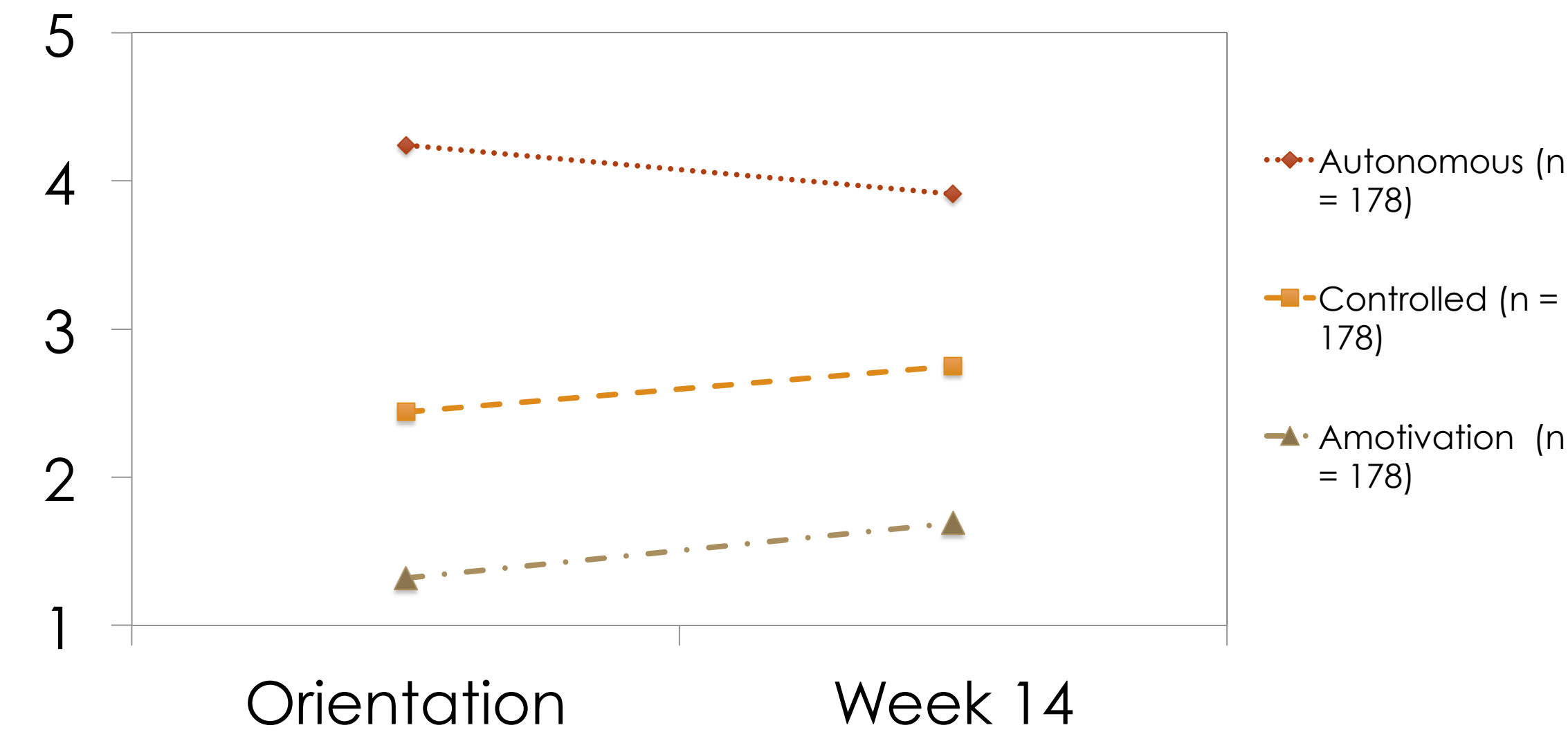
- 178 first-year students at a private liberal arts college

Procedure and Measures

- At T1 (orientation/week 0) and T2 (semester week 14), participants completed surveys assessing autonomous motivation⁶ (i.e., self-chosen, volitional), controlled motivation⁷ (i.e., externally or internally pressured), and amotivation⁸ (i.e., absence of motivation).
- GPA, academic actions, and leaves were collected from school records.

Results

Average Trajectories of Change Whole Sample

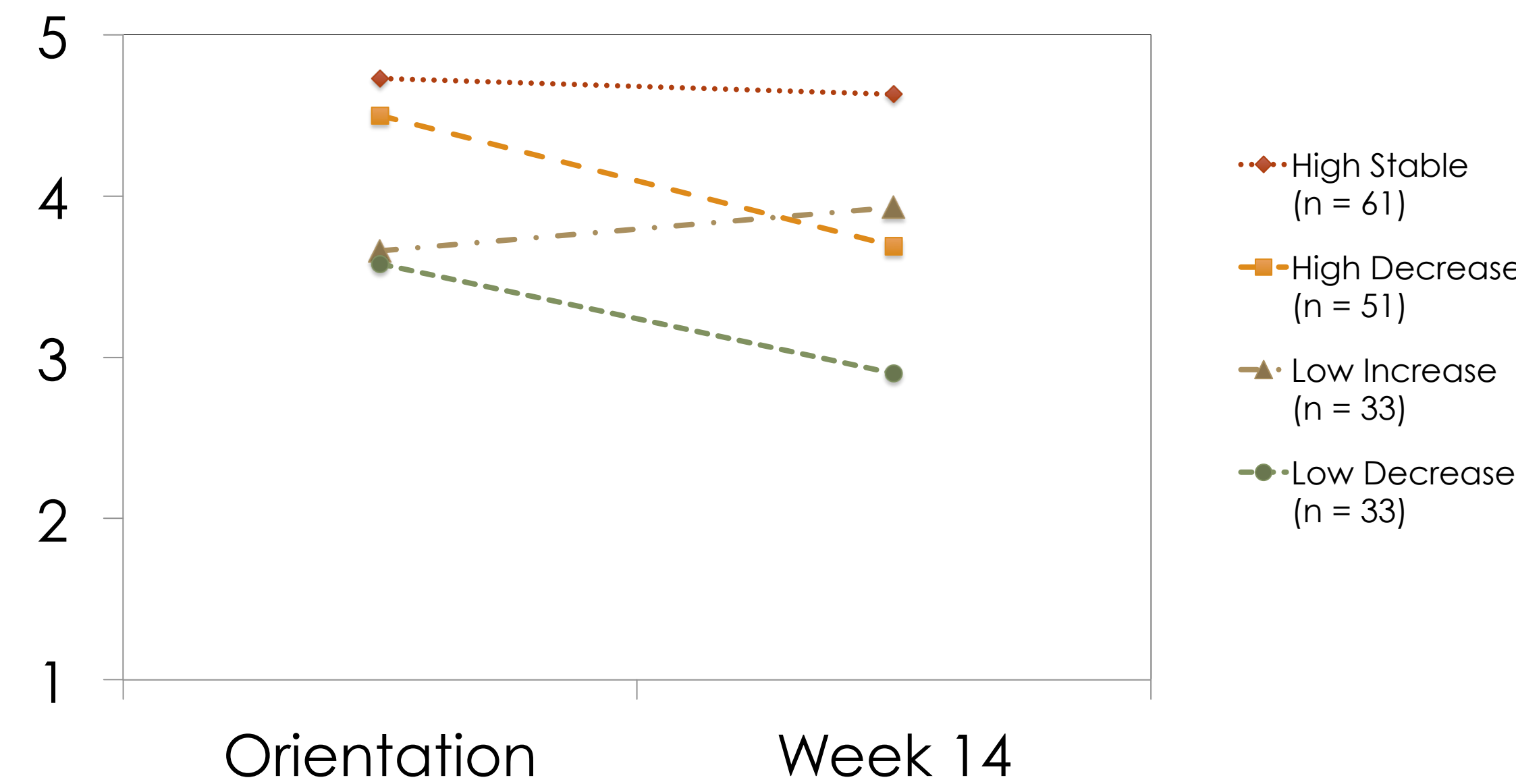


From the start to the end of the first semester, there was a significant decrease in autonomous motivation [$F(1, 177) = 58.88, p < .001, \eta^2 = .25$], and significant increases in controlled motivation [$F(1, 177) = 28.64, p < .001, \eta^2 = .14$] and amotivation [$F(1, 176) = 45.11, p < .001, \eta^2 = .20$].

Identifying Subgroups

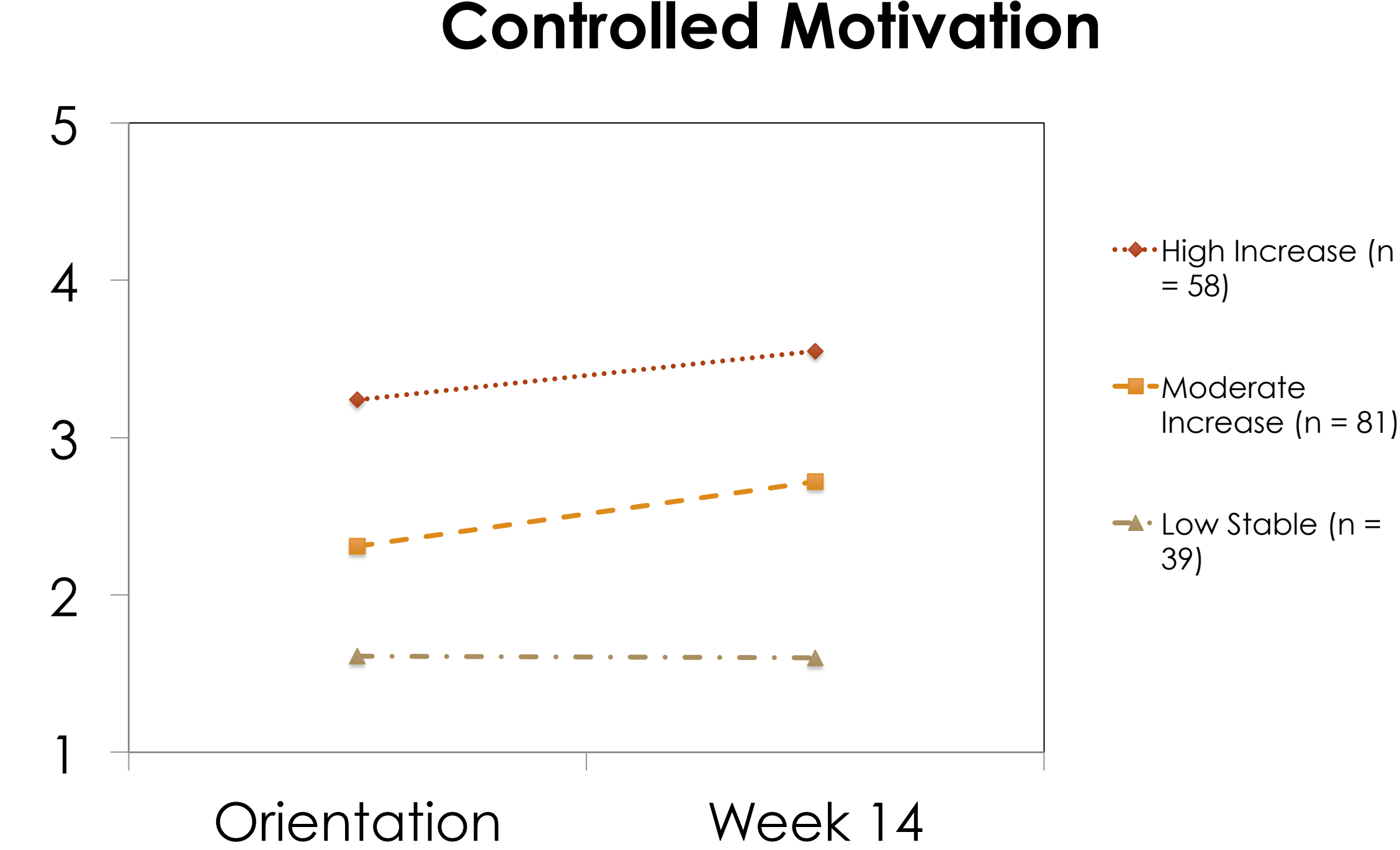
- Hierarchical (Ward's) followed by non-hierarchical (k-means) cluster analyses were conducted separately for each motive type (i.e., autonomous, controlled, amotivation). Inputs for each cluster analysis were the motive type scores at T1 and T2.
- Cluster solutions explained sufficient variance (64% - 88%) and were stable and replicable ($\kappa = .61 - .70$).
- There was substantial diversity in developmental trajectories.

Autonomous Trajectories of Change Autonomous Motivation



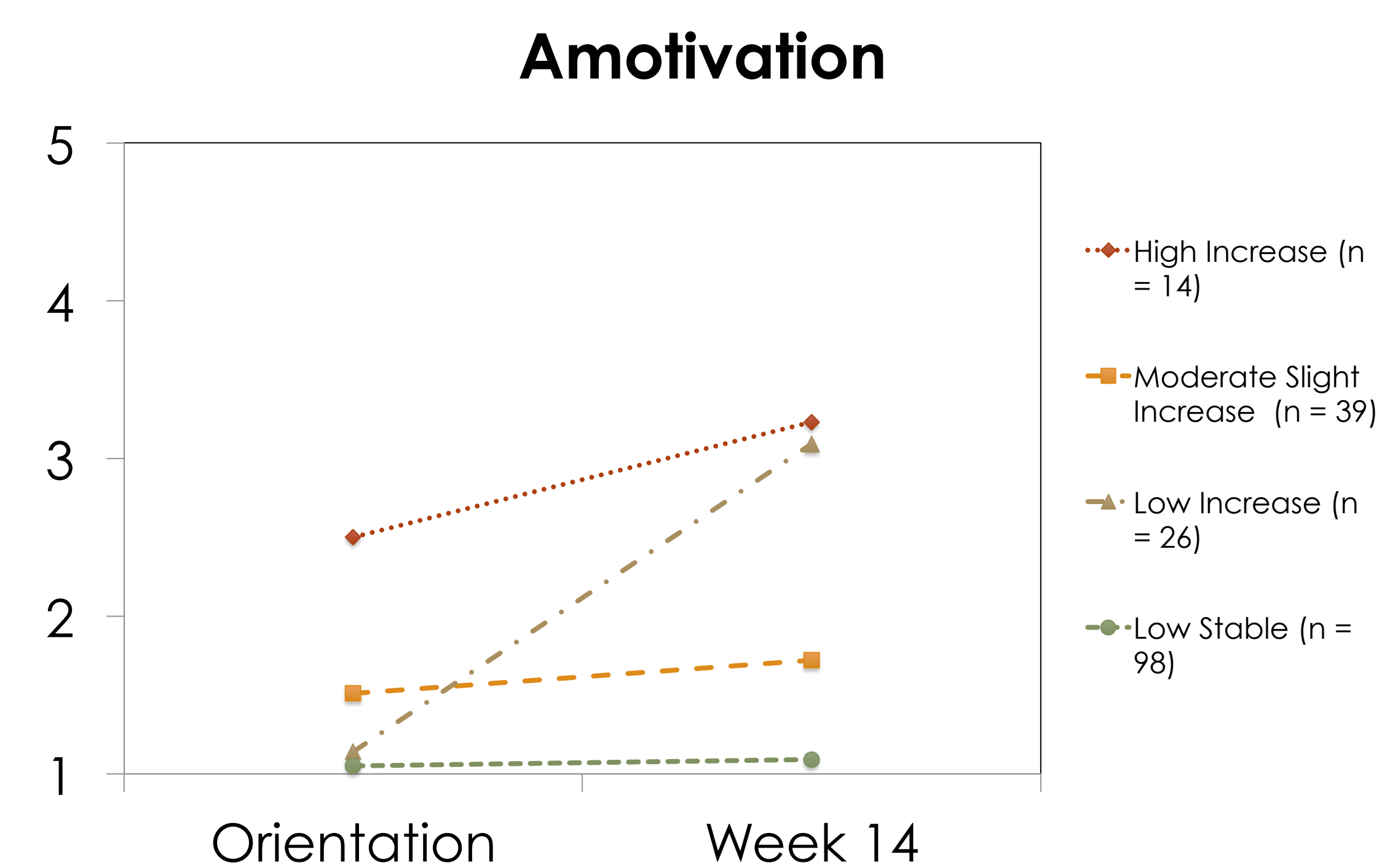
There were 4 clusters representing high stable, high decreasing, low increasing, and low decreasing groups. Students in the two declining trajectories were more likely to take a leave of absence by the end of the second semester, $\chi^2(3, N = 173) = 9.31, p < .05$. These students also tended to earn lower GPAs than those in the other two groups, $F(1, 169) = 2.05, p < .10, \eta^2 = .04$. See Table 1.

Controlled Trajectories of Change Controlled Motivation



There were 3 clusters representing high increasing, moderate increasing, and low stable groups. Groups did not differ on academic outcomes. See Table 1.

Amotivation Trajectories of Change Amotivation



There were 4 clusters representing high increasing, moderate slightly increasing, low increasing, and low stable groups. The low stable and moderate slight increase groups had higher GPAs than their peers in the sharply increasing groups, $F(3, 168) = 4.87, p < .01, \eta^2 = .08$. Likewise, members of the low stable group received more academic commendations than the other groups, whereas members of the high increase group received more negative academic actions (e.g., probation) than their peers, $\chi^2(6, N = 172) = 14.03, p < .05$. See Table 1.

Table 1: Academic Correlates by Cluster

Subgroup	Fall GPA <i>M (SD)</i>	% Leaves
Autonomous		
High Stable	3.23 (.50)	0
High Decrease	3.00 (.67)	9.8
Low Increase	3.22 (.50)	0
Low Decrease	3.01 (.57)	9.7
Controlled		
High Decrease	3.07 (.60)	3.5
Moderate Increase	3.11 (.57)	5.2
Low Stable	3.22 (.54)	5.1
Amotivation		
High Increase	2.85 (.70)	14.3
Moderate Stable	3.13 (.44)	2.6
Low Increase	2.83 (.63)	8.0
Low Stable	3.24 (.54)	3.2

Conclusions

- Mean-level analyses revealed an overall trend toward less adaptive motivation over the first semester of college: autonomous motivation declined while controlled motivation and amotivation increased
- Cluster analyses revealed heterogeneity, with more adaptive patterns among some subgroups.
- Students on trajectories with decreasing autonomous motivation and increasing amotivation were at higher risk of dropout and lower GPA.

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