

BEAT DRUGS FUND ASSOCIATION

FULL REPORT

Project reference no.: BDF 140028

Project title: Substance Abuse Rehabilitation in a Therapeutic Community: A Multiwave, Cross-Sequential, Mixed Methods Study of Christian Zheng Sheng College

Overall evaluation of the project

The proposed research project examined the longer-term positive changes in youth who are part of Zheng Sheng's program. Community psychologists advocate for a holistic approach to tackle youth substance abuse (e.g., Jason, Davis, Ferrari, & Bishop, 2001). This study sought to contribute to the literature by elucidating some of the underlying mechanisms of Christian Zheng Sheng College as a therapeutic community that help bring upon psychosocial transformation in the youth they serve.

This project had four main objectives: 1) replicate the results of the pilot study with a larger sample size and, thus, statistical power, 2) examine the longer-term effectiveness of the Zheng Sheng therapeutic community (TC) program, and 3) elucidate the processes underlying positive changes, and 4) develop causal models between different psychosocial factors and identify potential mediators (i.e., "how does it work") and moderators ("for whom does it work") in the models. We used both quantitative and qualitative methods to address these objectives.

Quantitative

Over the course of two years, we have collected quantitative data 12 times, across a total of 96 participants. Seven times were conducted at three-months intervals, and five were one-month follow-ups (see Table 1).

Table 1. Data collection dates and corresponding number of participants

Date	Number of participants
August 24, 2016	73
December 7, 2016	74
January 9, 2017	74
February 8, 2017	64
March 15, 2017	77
March 23, 2017	69
July 5, 2017	69
October 18, 2017	63
January 31, 2018	56
February 28, 2018	54
May 4, 2018	51
June 27, 2018	34

Prior to data collection, we reviewed the relevant literature and our previous pilot studies to identify a number of psychosocial variables pertinent to the Zheng Sheng context. In the design of our study, we also considered the timeframe of our project and the burden that our questionnaires might impose on our participants. Table 2 provides a summary of the variables included in the study:

Table 2. Study variables' mean and SD at baseline

Variable	Mean	SD	Max Score
<i>**Collected in 4 or more waves</i>			
Delayed Gratification	34.75	5.74	50
Self-Control	38.43	7.61	65
Meaning in Life			
Presence	25.23	5.91	35
Search	26.00	5.71	35
Consideration of Consequences			
Future Consequences	32.02	7.55	49
Immediate Consequences	28.32	6.75	49
Religious Coping			
Positive	19.52	8.40	35
Negative	14.93	6.57	35
Strength of Religious Faith	15.51	5.79	25
Satisfaction with Life Scale	20.39	6.59	
Grit	25.11	5.23	40
Dimensions of Change			
Community Responsibility	16.35	2.51	20
Resident Sharing, Support & Enthusiasm	26.93	5.40	40
Introspection & Self Management	25.83	4.04	35
Positive Self-Attitude	35.69	6.38	45
Social Network	12.05	2.25	15
<i>**Collected in less than 4 waves</i>			
Committed Actions	26.80	7.89	45
General Self Efficacy			
Hope	22.93	6.41	36
Self Reflection & Insight	68.58	10.02	100
Self Concept Clarity	33.80	6.26	60
Distress Tolerance Scale			
Tolerance	8.95	2.99	15
Absorption	9.23	3.23	15
Appraisal	18.60	4.90	30
Regulation	8.89	2.55	15
Correctional Orientation	41.62	9.51	70
Personal Responsibility	88.00	13.50	105

Methods and Results

In order to examine the longer-term effectiveness of the Zheng Sheng program, we took a closer look at the variables that had data for four or more waves. Through a mixed ANOVA models, we found the duration of stay at Zheng Sheng was a predictor of change in the delayed gratification, self-control, the presence of meaning in life, consideration of future and immediate consequences, religiousness, and psychological grit (Table 4).

Table 3. Study variables' mean and SD at 7 Waves

Variable	Wave 1	Wave 2	Wave 3	Wave 4	Wave 5	Wave 6	Wave 7
	Mean(SD)	Mean(SD)	Mean(SD)	Mean(SD)	Mean(SD)	Mean(SD)	Mean(SD)
Delayed Gratification	34.75(5.74)	34.05(5.62)	36.04(6.34)	35.64(6.34)	35.87(6.10)	37.07(4.71)	36.40(4.91)
Self-Control	38.43(7.61)	37.08(7.93)	38.03(8.41)	38.73(7.93)	39.64(7.48)	38.96(6.54)	38.06(6.17)
Meaning in Life							
Presence	25.23(5.91)	25.36(5.97)	26.59(5.57)	26.50(5.91)	26.69(5.77)	26.60(4.30)	27.47(4.54)
Search	26.00(5.71)	27.22(5.31)	27.38(4.95)	27.24(4.81)	26.06(6.83)	27.40(5.07)	26.41(5.32)
Consideration of Consequences							
Future Consequences	32.02(7.55)	33.92(6.98)	34.85(6.62)	34.18(6.40)	34.80(6.51)	36.00(5.48)	36.94(5.96)
Immediate Consequences	28.32(6.75)	29.10(6.61)	28.90(7.15)	29.82(7.19)	29.82(6.55)	27.70(6.50)	28.38(6.74)
Religious Coping							
Positive	19.52(8.40)	21.55(7.16)	22.18(8.37)	21.49(8.32)	21.98(7.89)	23.13(7.69)	24.40(6.78)
Negative	14.93(6.57)	15.63(6.29)	15.54(6.07)	14.81(5.99)	14.60(6.05)	14.98(6.67)	13.83(5.24)
Strength of Religious Faith	15.51(5.79)	17.20(5.50)	17.08(5.91)	16.76(5.92)	16.76(5.92)	/	18.57(3.62)
Satisfaction with Life Scale	20.39(6.59)	20.37(5.71)	20.65(5.31)	20.88(5.19)	20.88(5.19)	19.16(5.91)	21.46(6.85)
Grit	25.11(5.23)	25.31(6.03)	25.53(5.94)	25.65(5.63)	25.65(5.63)	/	27.00(5.49)
Dimensions of Change							
Community Responsibility	16.35(2.51)	16.51(2.38)	16.59(2.36)	16.38(2.44)	16.83(2.12)	/	16.23(2.21)
Resident Sharing, Support & Enthusiasm	26.93(5.40)	26.61(5.80)	26.90(5.34)	27.91(5.71)	27.46(6.51)	/	26.66(5.43)
Introspection & Self Management	25.83(4.04)	26.89(4.31)	27.54(4.00)	27.34(3.94)	28.13(4.68)	/	28.06(3.58)
Positive Self-Attitude	35.69(6.38)	36.80(5.62)	37.73(5.10)	37.00(5.39)	38.15(5.10)	/	37.80(5.06)
Social Network	12.05(2.25)	12.41(2.31)	12.56(2.21)	12.57(1.90)	12.81(1.94)	/	12.63(2.20)

Table 4. Results of mixed models of study variables.

	df	F	<i>p</i>
Delayed Gratification	331.28	44.10	<.001
Self-Control	394.18	34.93	<.001
Meaning in Life			
Presence	273.21	28.38	<.001
Search	210.01	0.26	0.614
Consideration of Consequences			
Future Consequences	277.79	50.26	<.001
Immediate Consequences	232.11	4.83	.029
Religious Coping			
Positive	363.32	31.34	<.001
Negative	225.09	0.31	.579
Strength of Religious Faith	312.40	23.00	<.001
Satisfaction with Life Scale	210.63	1.63	.203
Grit	320.43	18.43	<.001
Dimensions of Change			
Community Responsibility	204.89	6.11	.014
Resident Sharing, Support & Enthusiasm	218.78	1.76	.185
Introspection & Self-Management	217.25	31.59	<.001
Positive Self-Attitude	253.72	23.43	<.001
Social Network	204.86	0.84	.360

Figures 1 – 16 depict the trajectories of change over time of the 16 variables reported in Table 4.

Figure 1. Trajectory of change of Delayed Gratification over time

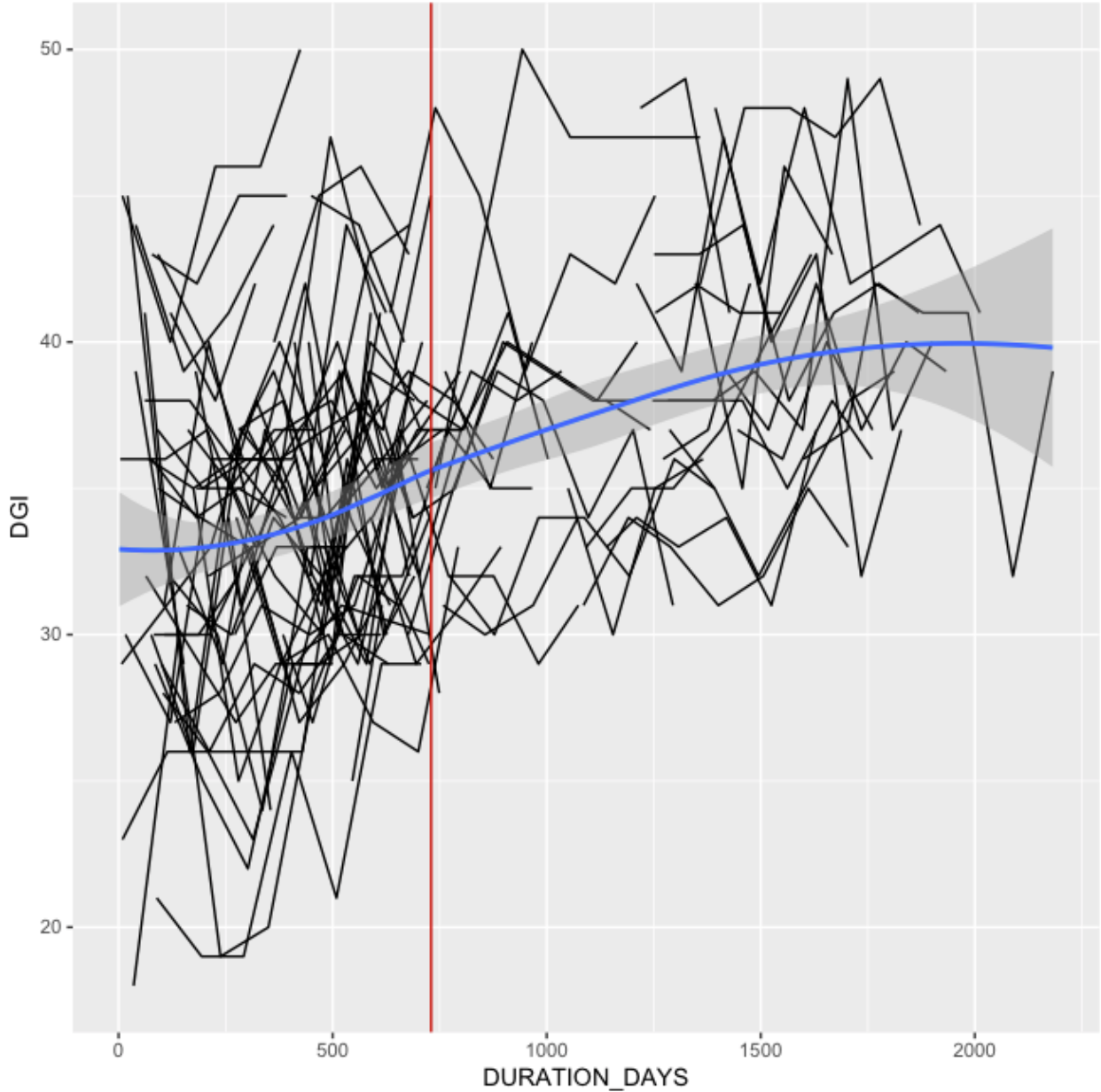


Figure 2. Trajectory of change of Self-Control over time

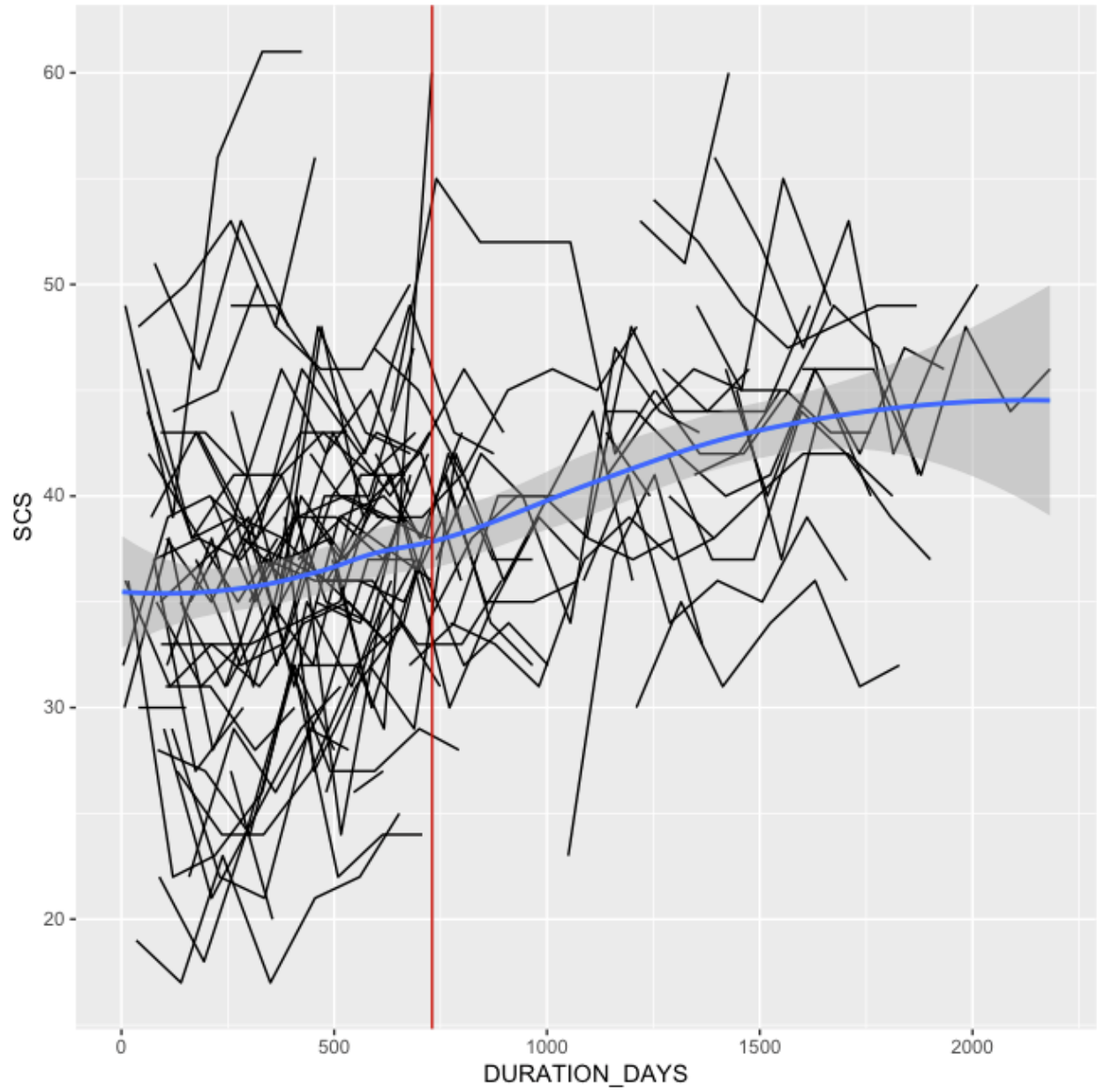


Figure 3. Trajectory of change of Meaning in Life (Presence subscale) over time

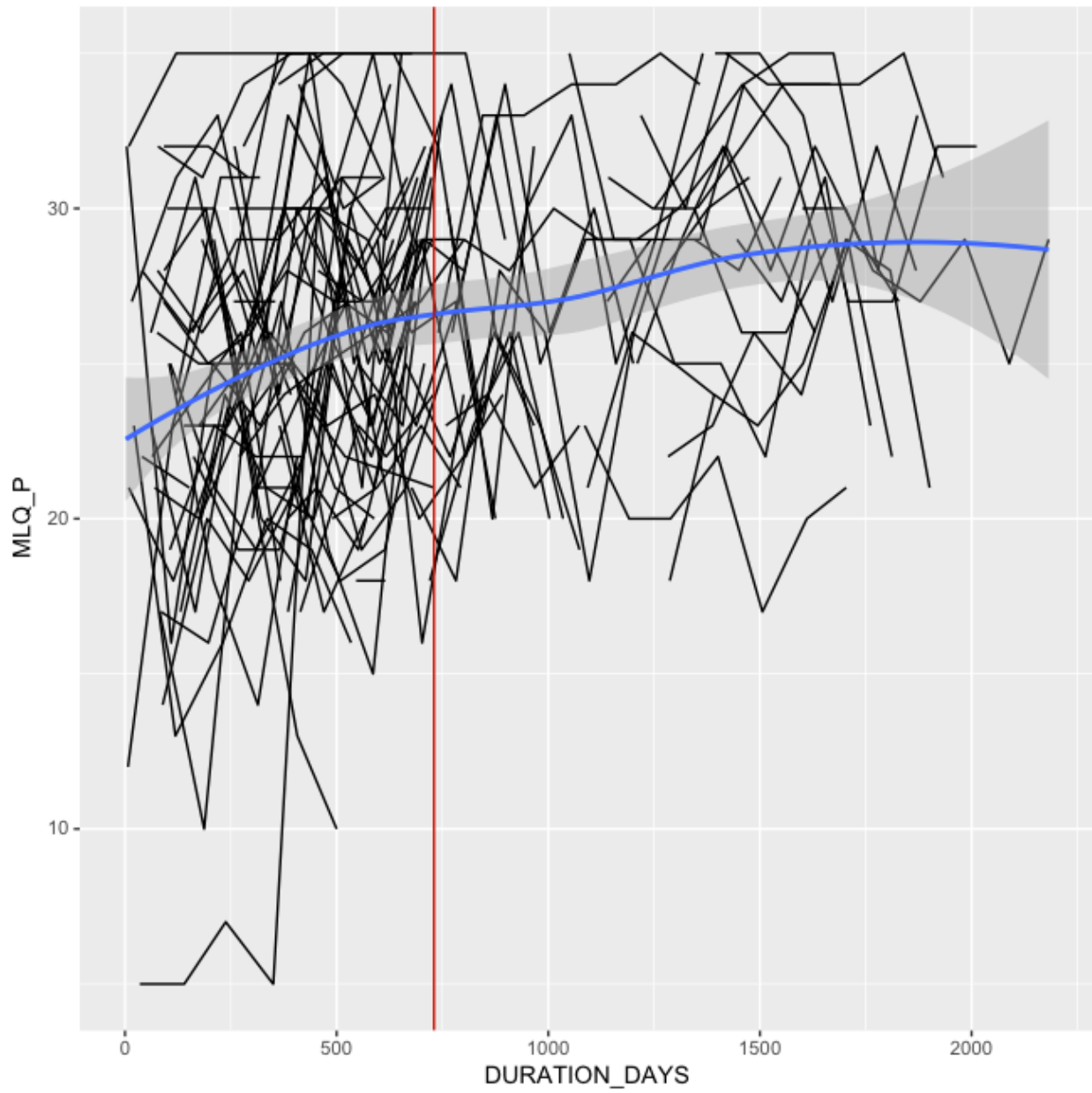


Figure 4. Trajectory of change of Meaning in Life (Search subscale) over time

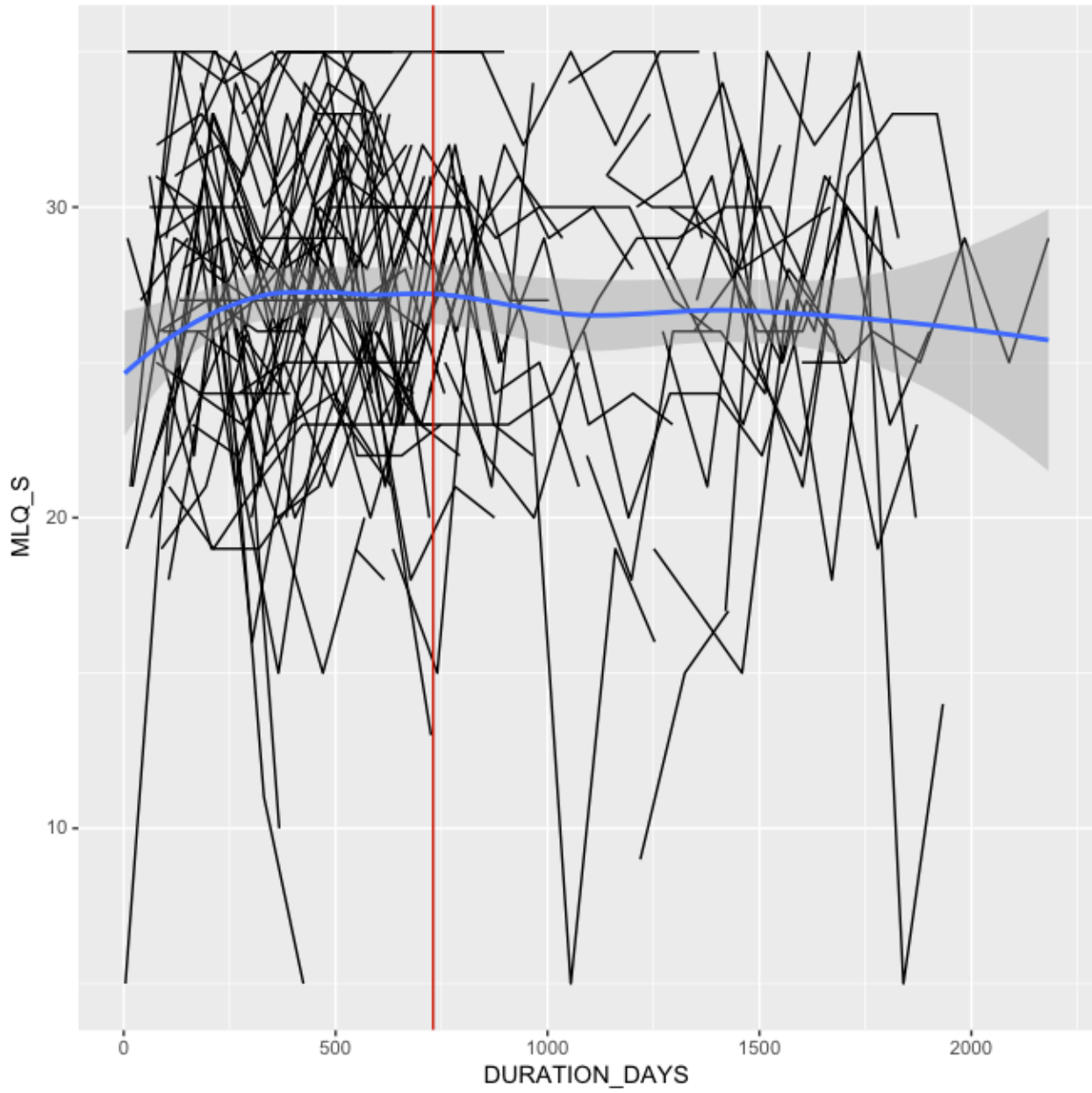


Figure 5. Trajectory of change of Consideration of Consequences (Future Consequences subscale) over time

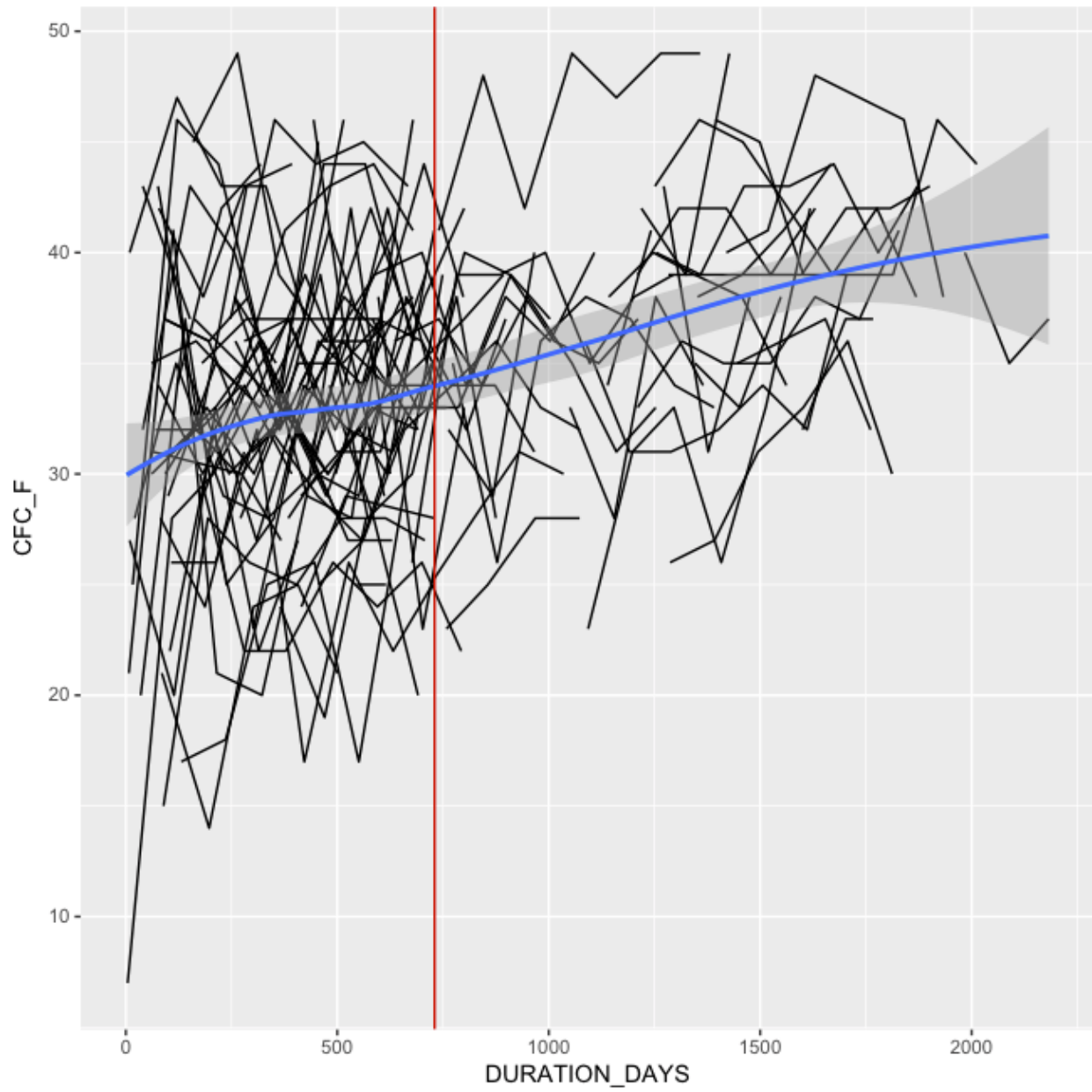


Figure 6. Trajectory of change of Consideration of Consequences (Immediate Consequences subscale) over time

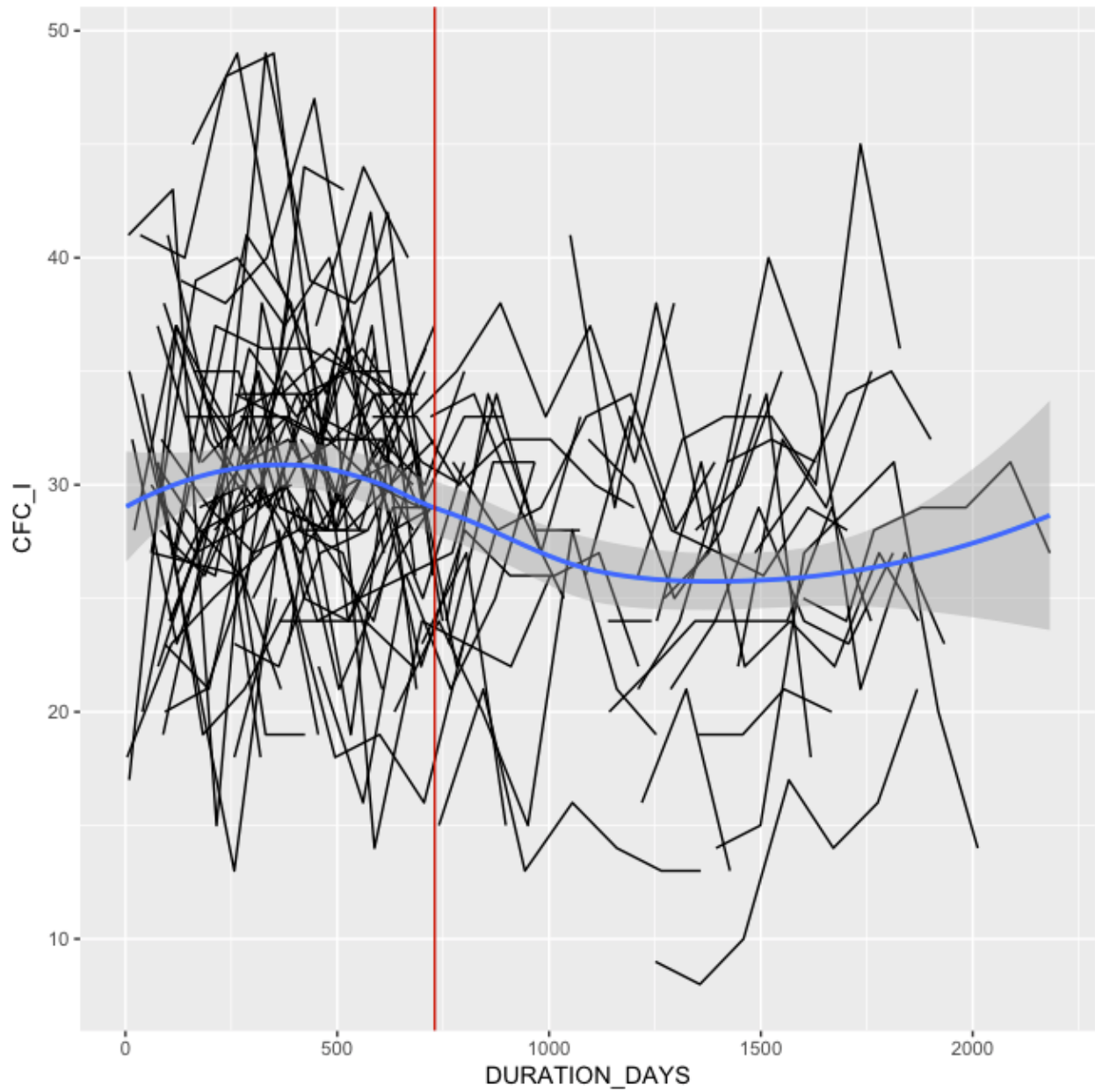


Figure 7. Trajectory of change of Religious Coping (Positive subscale) over time

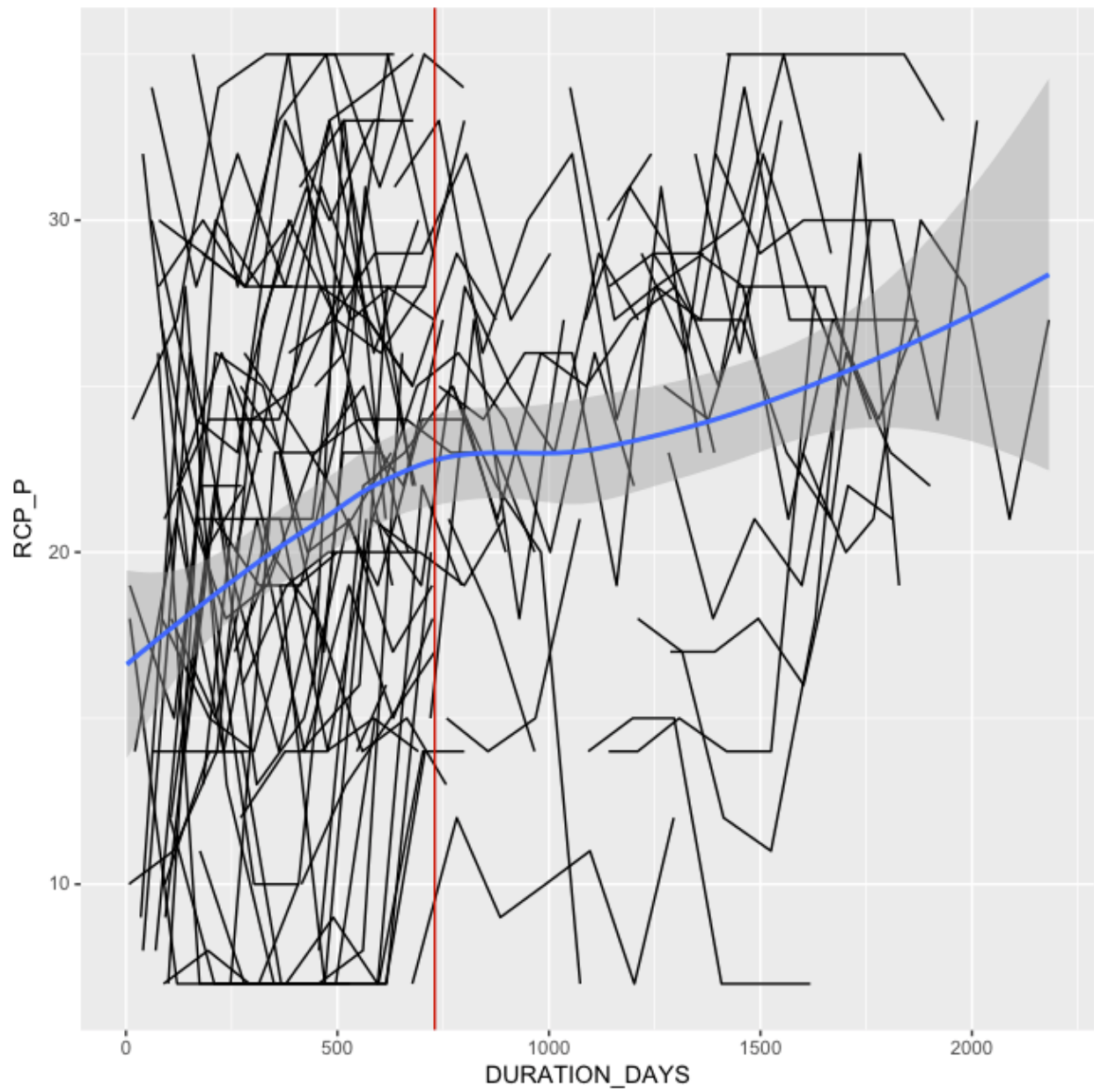


Figure 8. Trajectory of change of Religious Coping (Negative subscale) over time

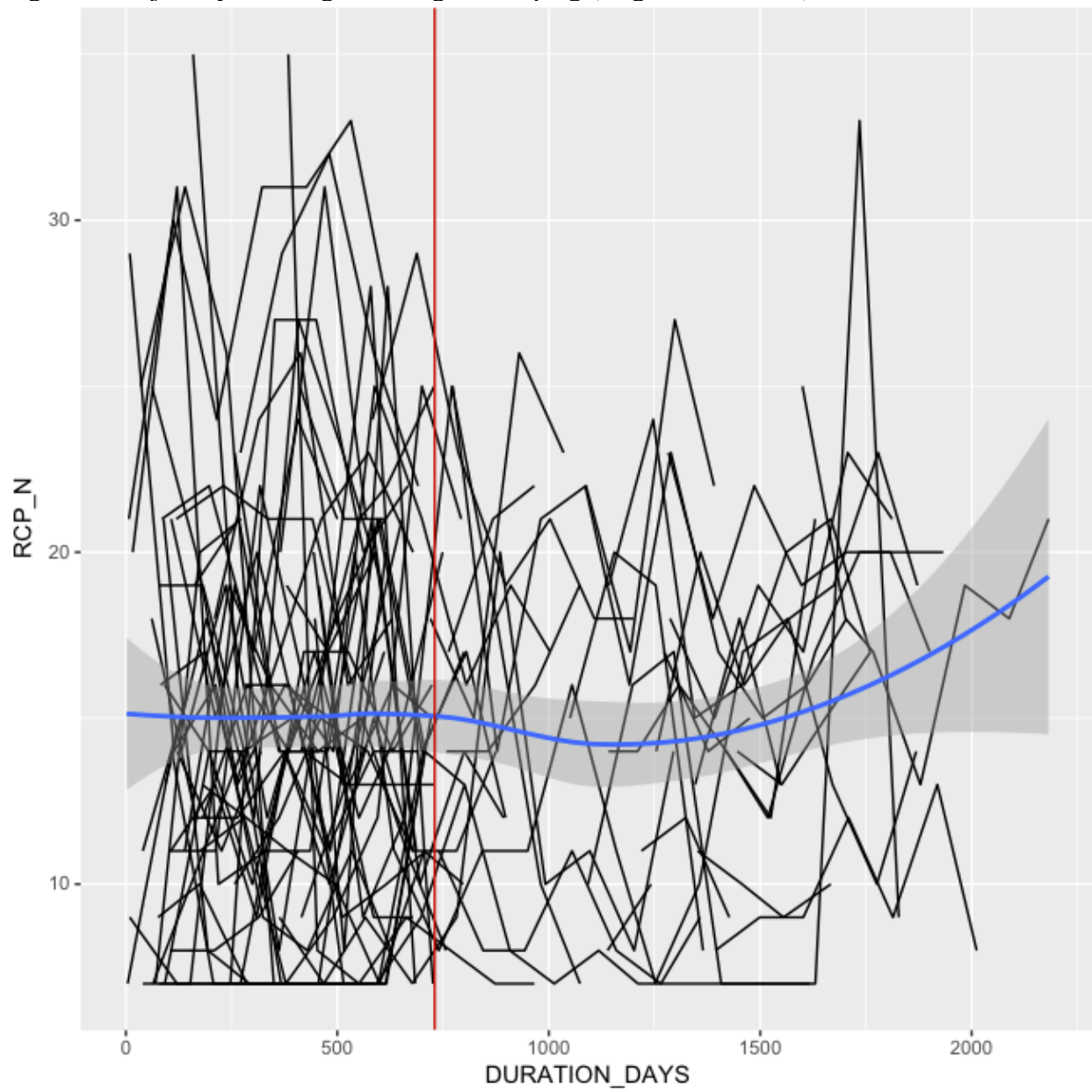


Figure 9. Trajectory of change of Strength of Religious Faith over time

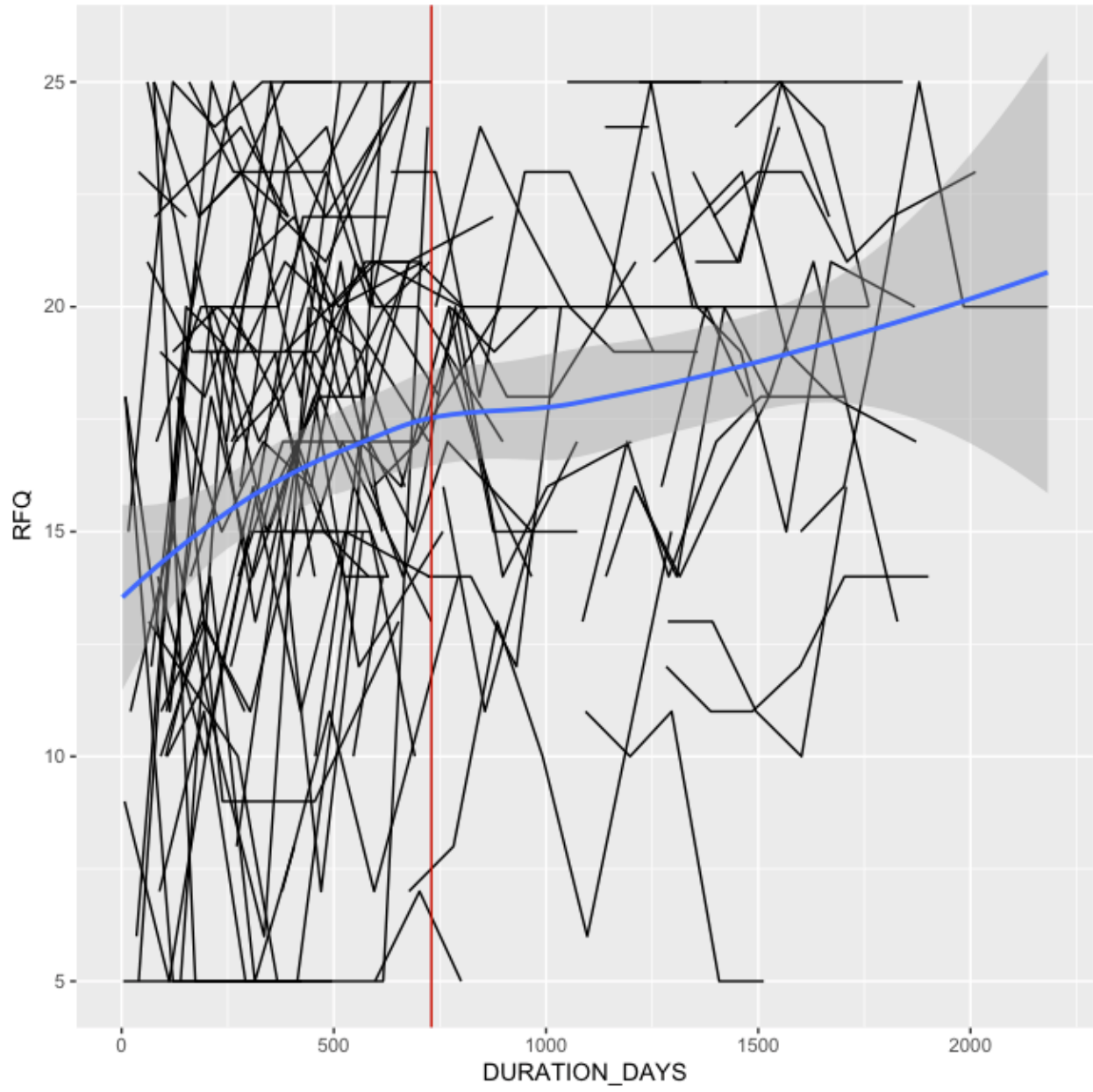


Figure 10. Trajectory of change of Satisfaction with Life over time

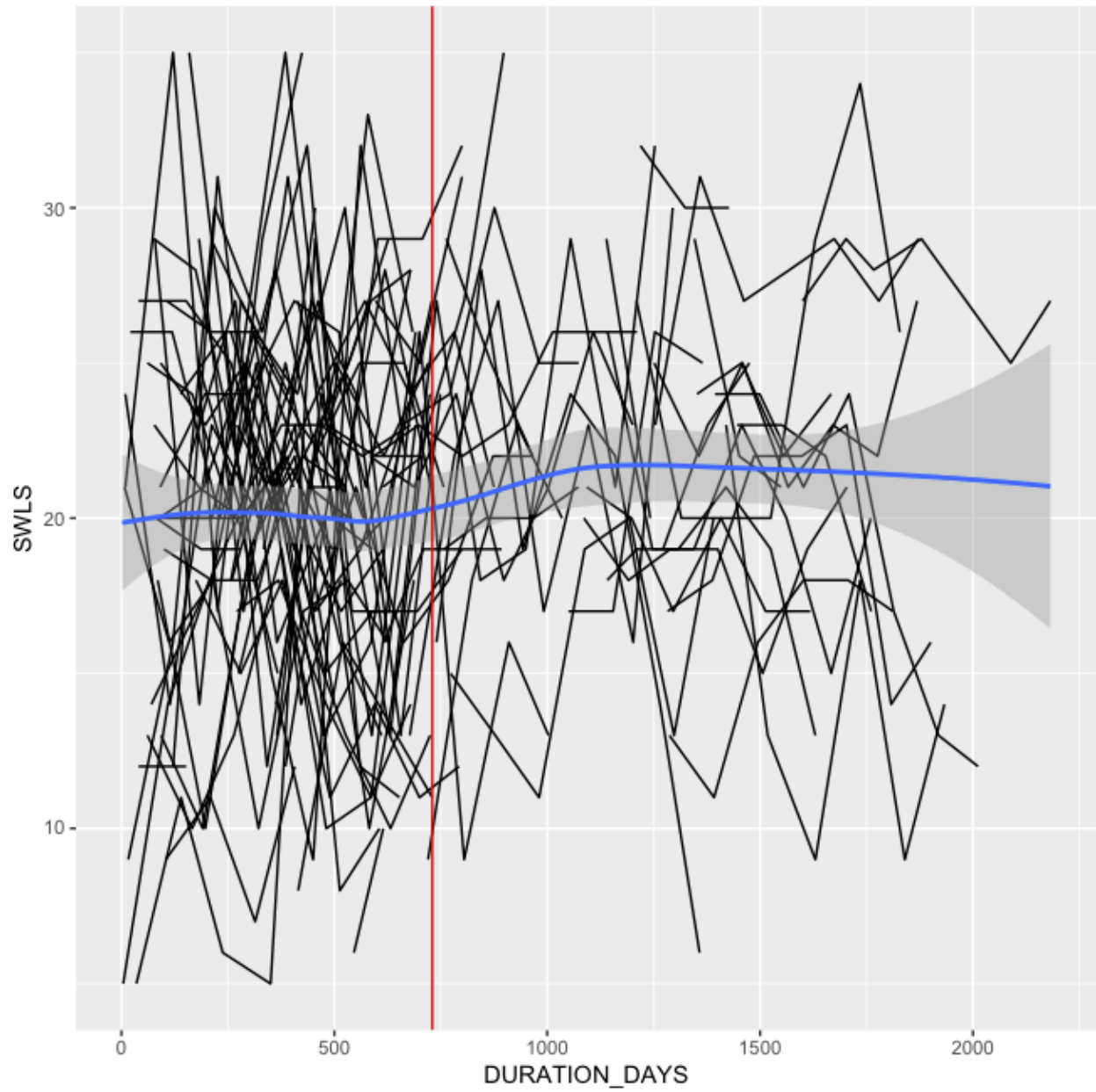


Figure 11. Trajectory of change of Grit over time

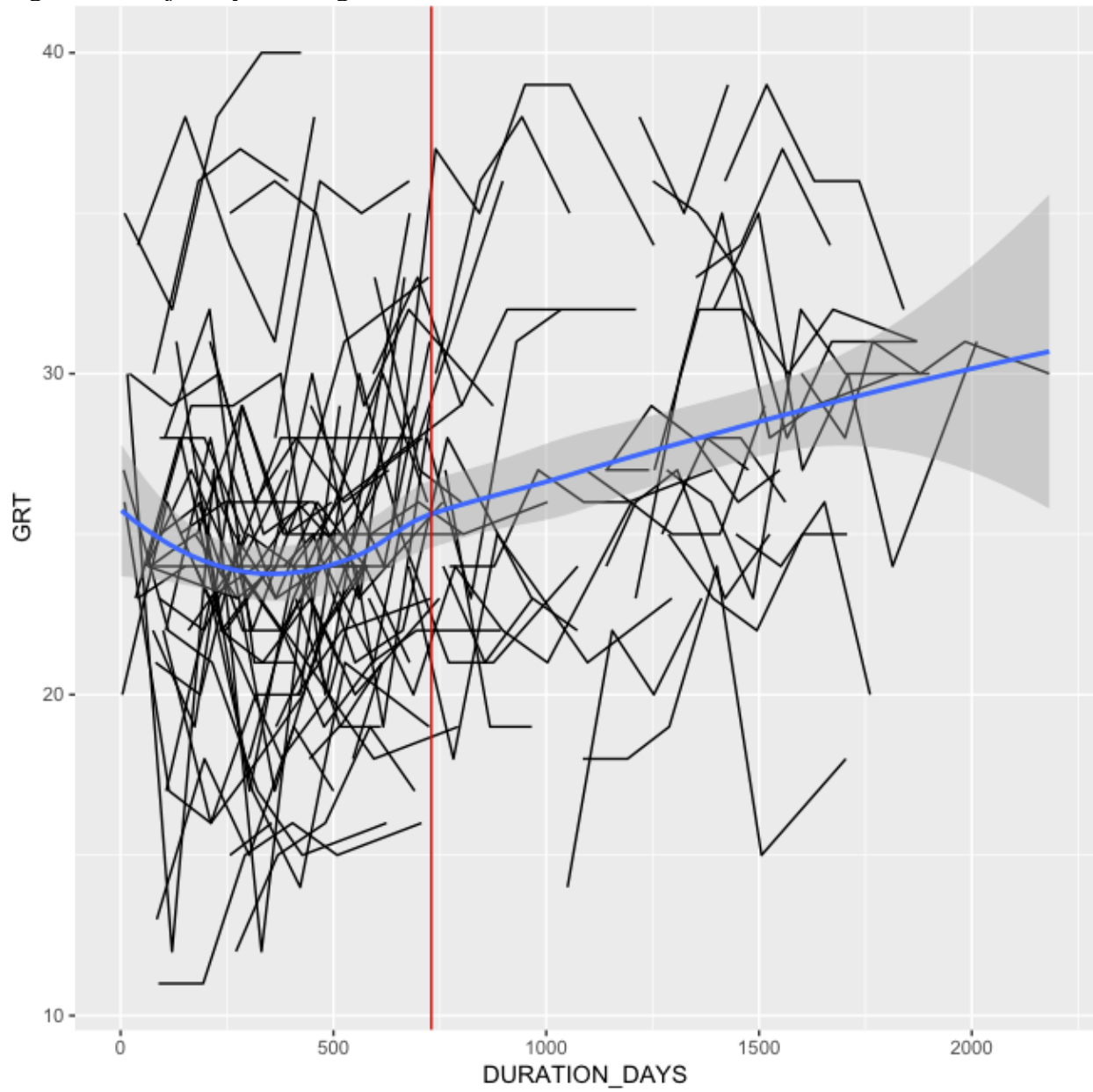


Figure 12. Trajectory of change of Dimensions of Change (Community Responsibility subscale) over time

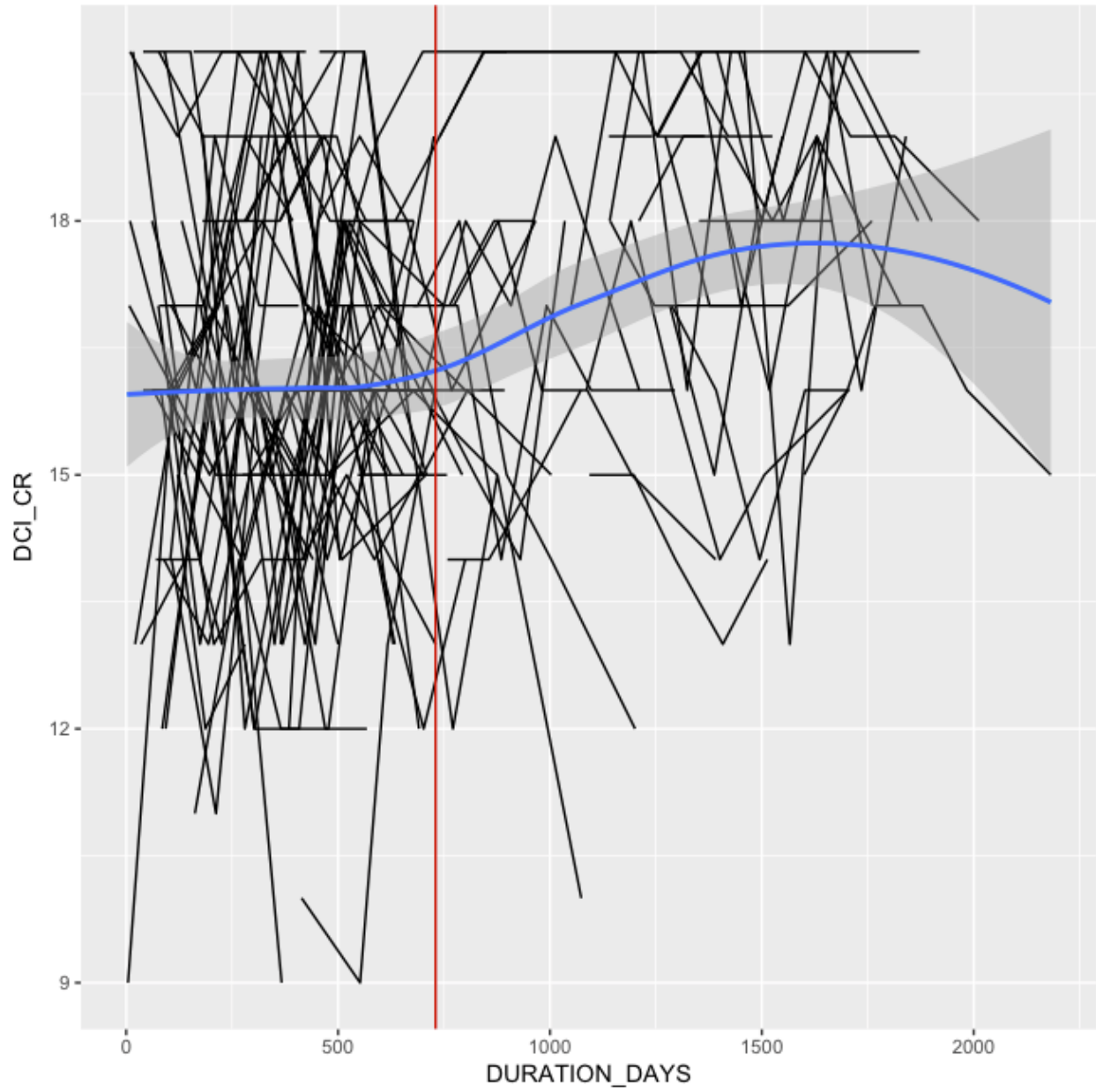


Figure 13. Trajectory of change of Dimensions of Change (Resident Sharing, Support & Enthusiasm subscale) over time

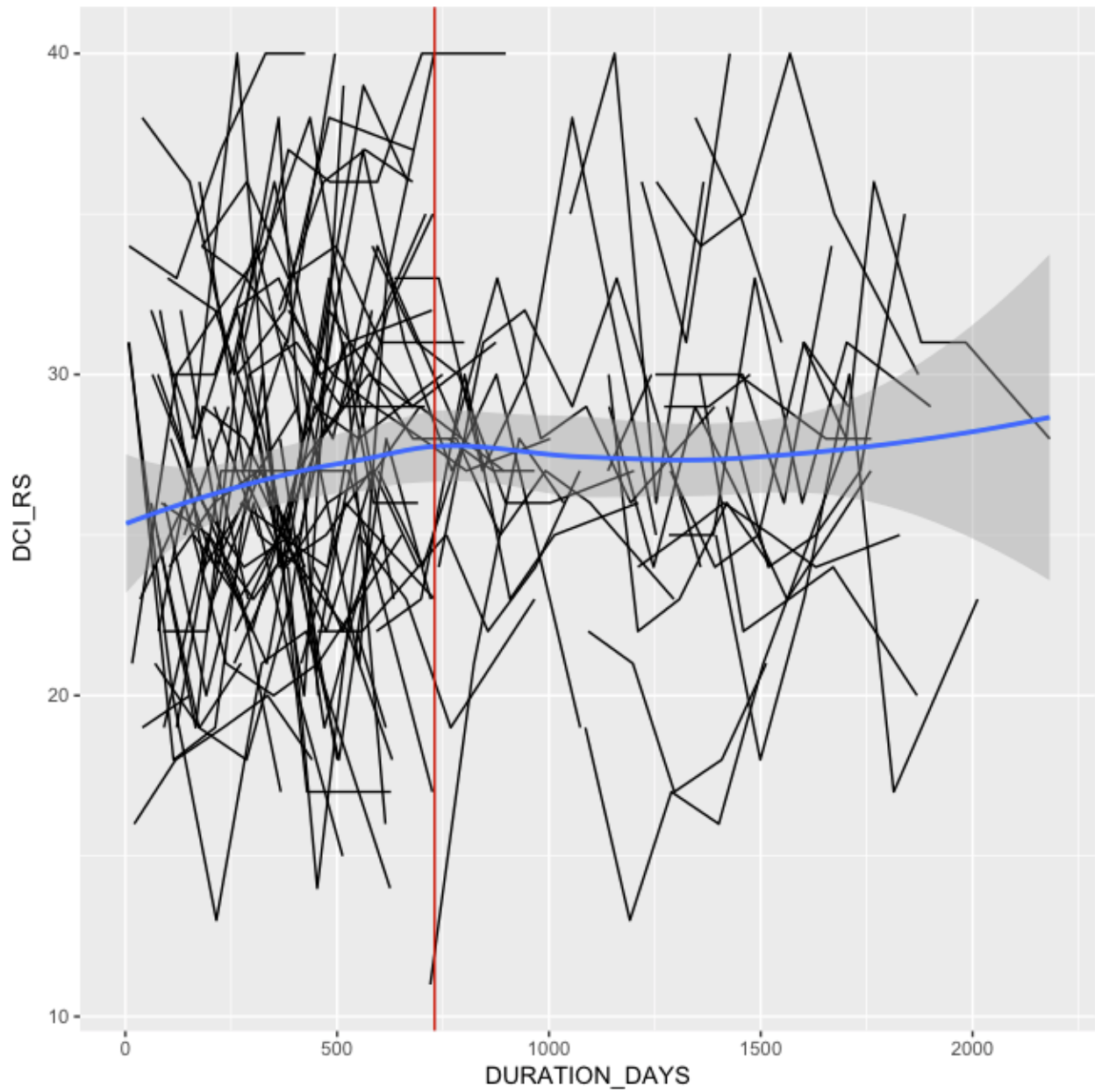


Figure 14. Trajectory of change of Dimensions of Change (Introspection & Self-Management subscale) over time

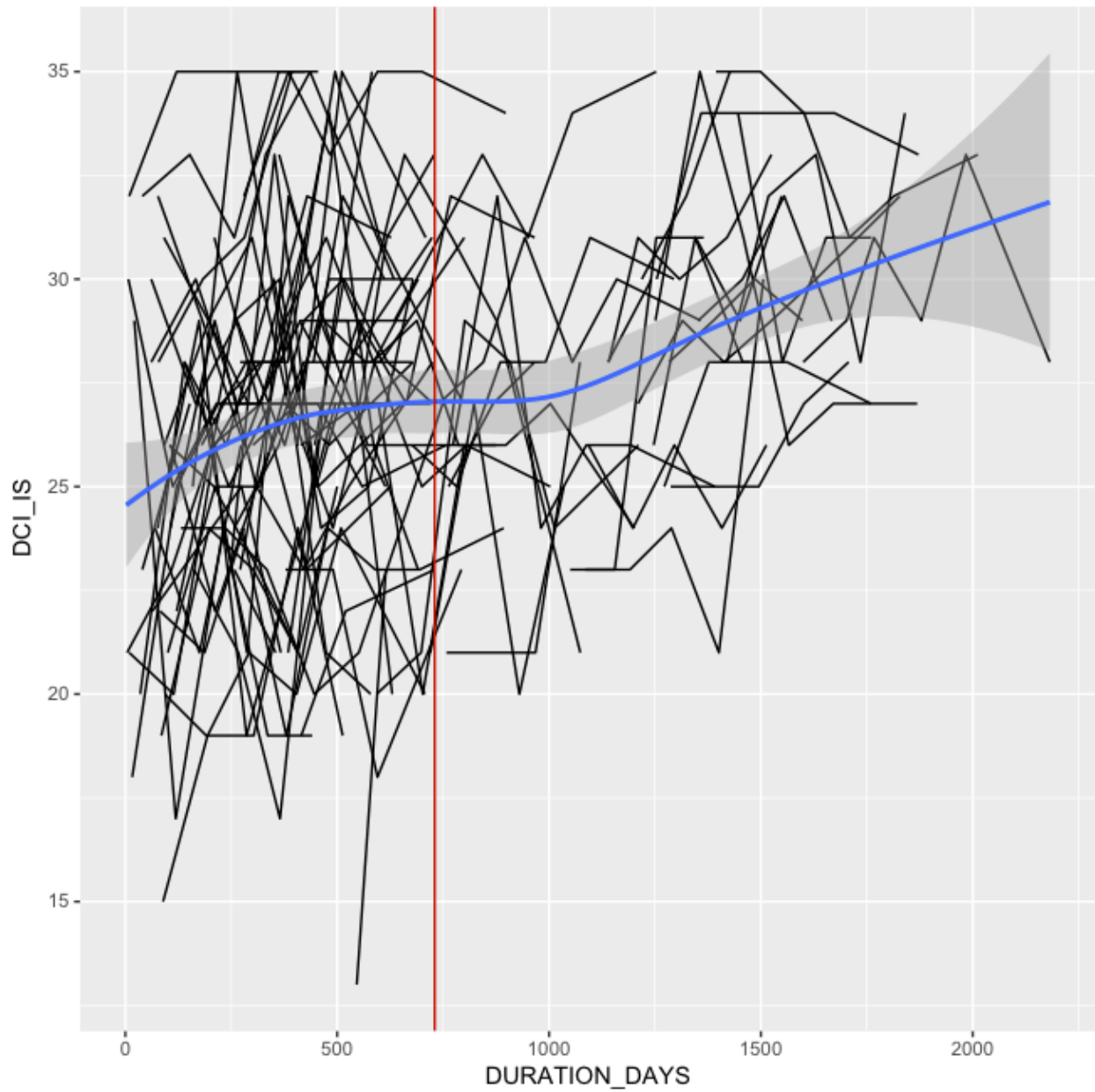


Figure 15. Trajectory of change of Dimensions of Change (Positive Self-Attitude subscale) over time

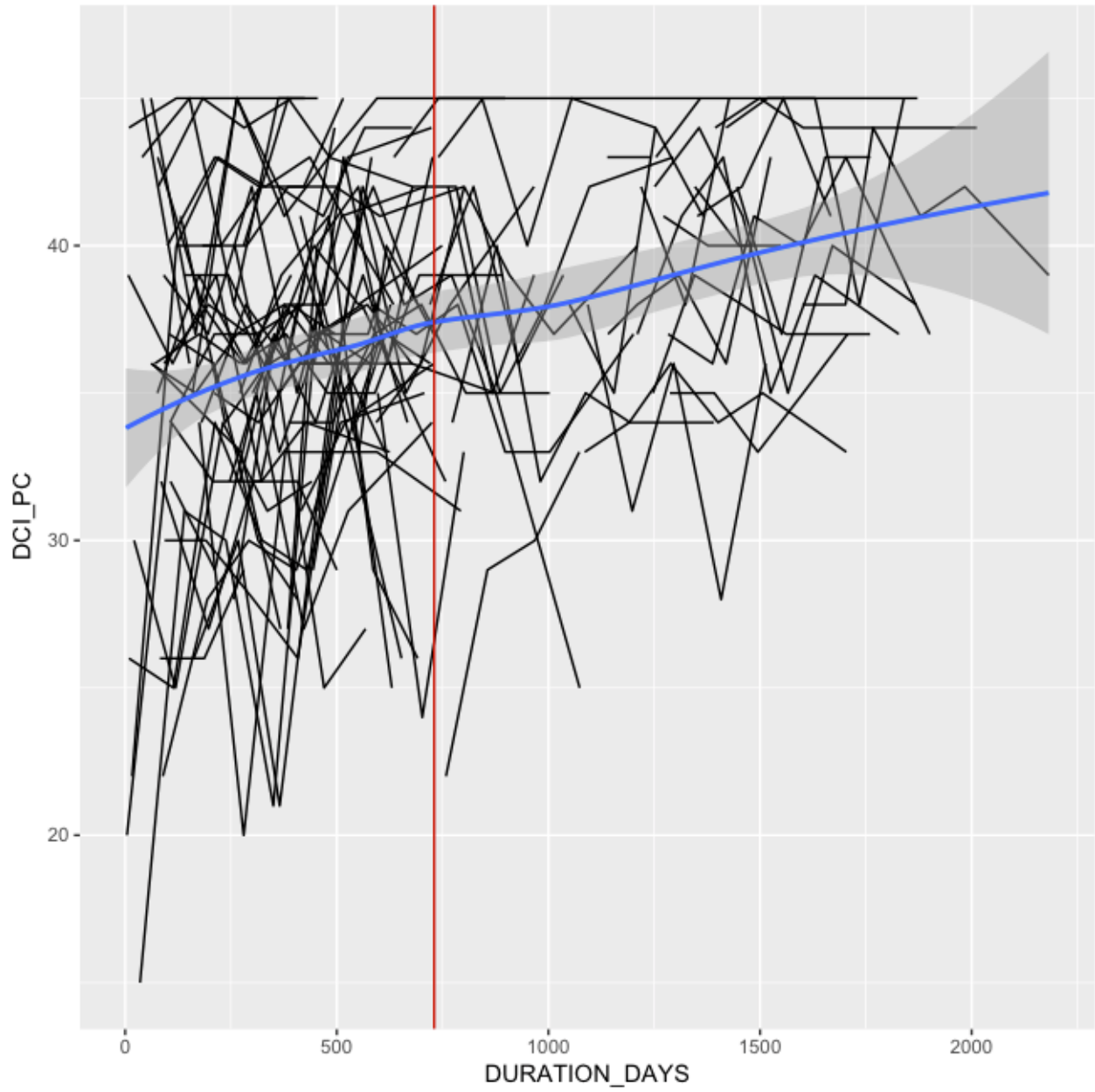
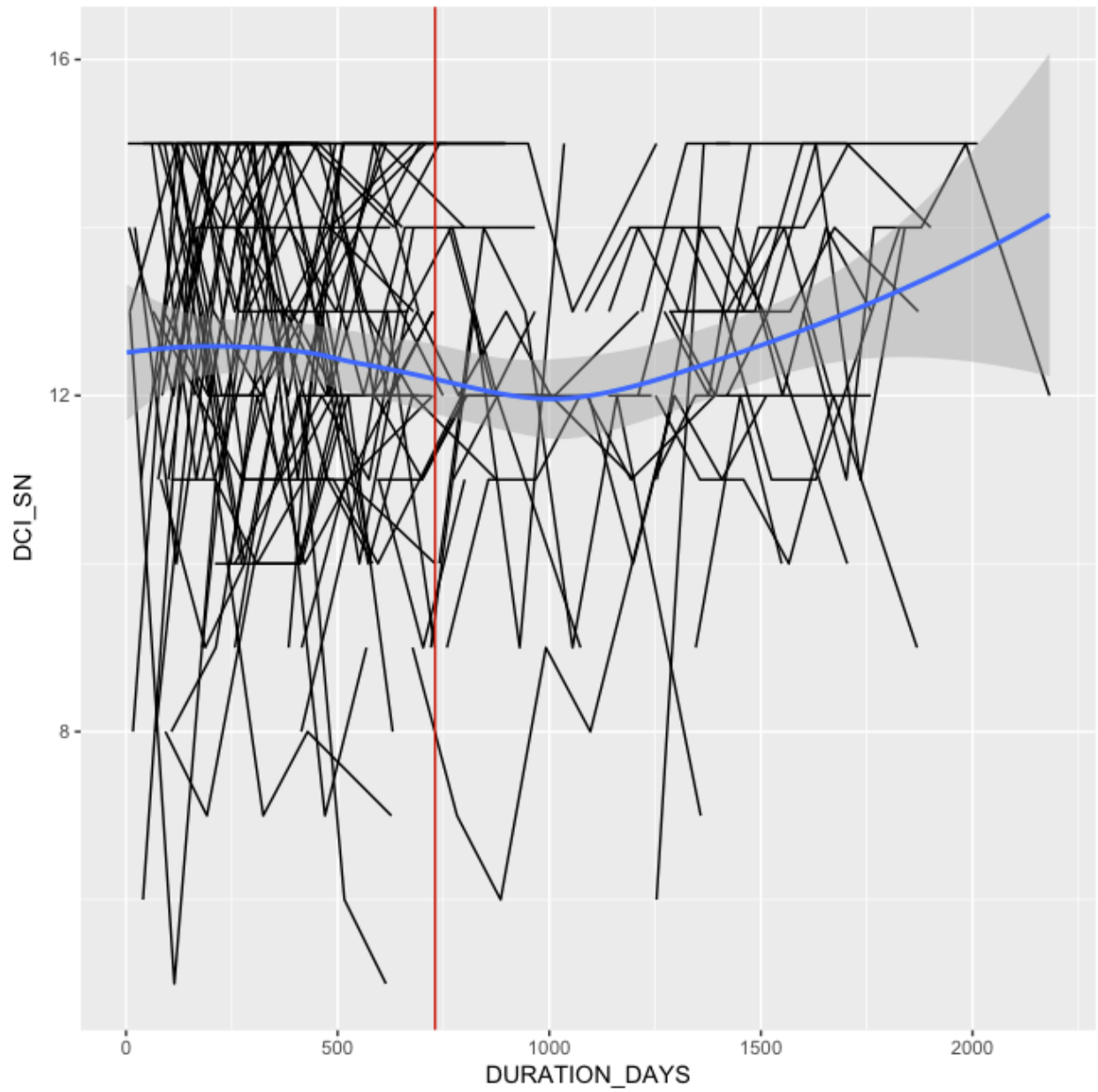
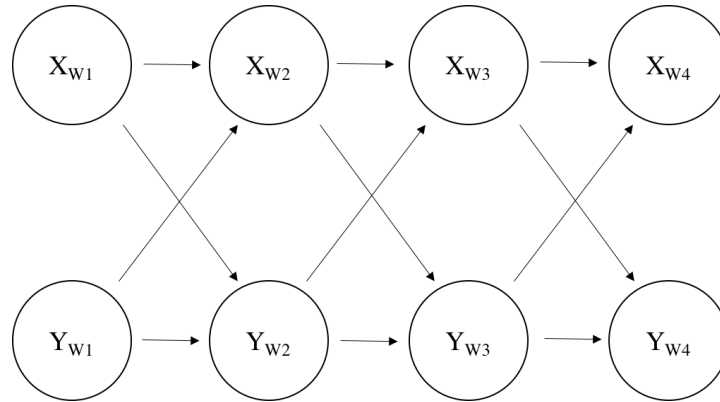


Figure 16. Trajectory of change of Dimensions of Change (Social Network subscale) over time



In order to better understand the underlying change processes between variables, and potentially elucidate the causal changes between variables, we have conducted a series of cross-lagged panel analysis across the first four waves (Figure 17).

Figure 17. Cross-lagged panel analysis



In cross-lagged analysis, the latter wave of a variable (i.e. X_{W2}) is regressed against the prior wave of another variable (i.e. Y_{W1}), while controlling for its prior wave (i.e. X_{W1}). A full dual model contains pathways between variables X and Y. If releasing the pathways between X and Y does not significantly impact the model fit assessed through chi-square difference test, then a univariate or no-pathway model should be adopted instead. We have conducted cross-lagged analysis with variables that had data for four or more waves. All models have been controlled for gender, duration of stay and drug history at Wave 1. Selected results are as follows:

Table 5. Results of Cross-lagged panel analysis.

X	Y	best-fit model	X -> Y		Y -> X	
			estimate	p	estimate	p
Meaning in life (Presence subscale)	Positive Religious Coping	dual	0.147	0.02	0.085	0.017
	Negative Religious Coping	no				
	Strength of Religious Faith	dual	0.101	0.035	0.135	0.007
	Satisfaction with Life	dual	0.169	0.004	0.112	0.022
	Consideration of Future Consequences	dual	0.197	0.001	0.252	<0.001
	Consideration of Immediate Consequences	X -> Y	-0.184	0.003		
	Grit: Consistency of Interest	Y -> X			0.121	0.01
	Grit: Perseverance of Efforts	dual	0.121	0.015	0.109	0.014
	Delayed Gratification	dual	0.262	<0.001	0.229	<0.001
	Self-Control	dual	0.156	<0.001	0.147	<0.001
Consideration for Consequences (Future Consequences subscale)	Positive Religious Coping	no				
	Negative Religious Coping	dual	-0.100	0.047	-0.153	0.003
	Strength of Religious Faith	no				
	Satisfaction with Life	X -> Y	0.148	0.005		
	Meaning in life (Presence)	dual	0.252	<0.001	0.197	0.001
	Meaning in life (Search)	no				
	Grit: Consistency of Interest	dual	0.059	0.039	0.323	0.004
	Grit: Perseverance of Efforts					
	Delayed Gratification	dual	0.124	0.004	0.231	<0.001
	Self-Control	dual	0.119	0.014	0.351	<0.001
	Grit: Consistency of Interest	Y -> X			0.151	0.001
Consideration for Consequences (Immediate Consequences subscale)	Positive Religious Coping	no				
	Negative Religious Coping	Y -> X			0.143	0.019
	Strength of Religious Faith	no				
	Satisfaction with Life	X -> Y	-0.172	<0.001		
	Meaning in life (Presence)	Y -> X			-0.184	0.003
	Meaning in life (Search)	X -> Y	0.092	0.04		
	Grit: Consistency of Interest	no				
	Grit: Perseverance of Efforts	Y -> X			-0.222	0.001
	Delayed Gratification	Y -> X			-0.183	0.01
	Self-Control	Y -> X			-0.320	<0.001
Delayed Gratification	Positive Religious Coping	no				
	Negative Religious Coping	Y -> X			-0.104	0.015
	Strength of Religious Faith	dual	0.084	0.044	0.096	0.047
	Satisfaction with Life	X -> Y	0.242	<0.001		

	Meaning in life (Presence)	dual	0.229	<0.001	0.262	<0.001
	Meaning in life (Search)	no				
	Grit: Consistency of Interest	dual	0.104	0.002	0.289	0.001
	Grit: Perseverance of Efforts	dual	0.261	<0.001	0.188	0.002
	Consideration of Future Consequences	dual	0.351	<0.001	0.119	0.014
	Consideration of Immediate Consequences	X -> Y	0.151	0.001		
Self-Control	Positive Religious Coping	no				
	Negative Religious Coping	dual	-0.096	0.038	-0.137	0.015
	Strength of Religious Faith	no				
	Satisfaction with Life	X -> Y	0.103	0.017		
	Meaning in life (Presence)	dual	0.147	<0.001	0.156	<0.001
	Meaning in life (Search)	no				
	Grit: Consistency of Interest	no				
	Grit: Perseverance of Efforts	X -> Y	0.195	<0.001		
	Consideration of Future Consequences	X -> Y	-0.183	0.01		
	Consideration of Immediate Consequences	X -> Y	-0.320	<0.001		
Dimensions of Change (Community Responsibility subscale)	Positive Religious Coping	no				
	Negative Religious Coping	no				
	Strength of Religious Faith	Y -> X			0.08	0.002
	Consideration of Future Consequences	dual	0.321	0.041	0.084	<0.001
	Consideration of Immediate Consequences	no				
	Grit	Y -> X			0.076	0.002
	Delayed Gratification	dual	0.24	0.042	0.088	<0.001
	Self-Control	no				
	Meaning in life (Presence)	dual	0.567	<0.001	0.115	<0.001
	Meaning in life (Search)	Y -> X			0.069	0.011
Dimensions of Change (Resident Sharing, Support & Enthusiasm subscale)	Positive Religious Coping	no				
	Negative Religious Coping	no				
	Strength of Religious Faith	Y -> X			0.138	0.013
	Consideration of Future Consequences	Y -> X			0.111	0.018
	Consideration of Immediate Consequences	no				
	Grit	dual	0.099	0.041	0.11	0.036
	Delayed Gratification	dual	0.133	0.008	0.193	<0.001
	Self-Control	X -> Y	0.204	0.001		
	Meaning in life (Presence)	dual	0.175	0.001	0.212	<0.001
	Meaning in life (Search)	Y -> X			0.15	0.016
	Satisfaction with Life	no				

Dimensions of Change (Introspection & Self-Management subscale)	Positive Religious Coping	Y -> X			0.087	0.003
	Negative Religious Coping	no				
	Strength of Religious Faith	Y -> X			0.171	<0.001
	Consideration of Future Consequences	dual	0.313	0.001	0.177	<0.001
	Consideration of Immediate Consequences	no				
	Grit	dual	0.239	<0.001	0.142	<0.001
	Delayed Gratification	dual	0.202	0.008	0.169	<0.001
	Self-Control	dual	0.313	<0.001	0.11	<0.001
	Meaning in life (Presence)	dual	0.223	0.003	0.151	0.001
	Meaning in life (Search)	no				
Satisfaction with Life	no					
Dimensions of Change (Positive Self-Attitude subscale)	Positive Religious Coping	Y -> X			0.106	0.004
	Negative Religious Coping	no				
	Strength of Religious Faith	Y -> X			0.177	0.001
	Consideration of Future Consequences	dual	0.211	0.003	0.175	<0.001
	Consideration of Immediate Consequences	no				
	Grit	dual	0.183	<0.001	0.151	0.003
	Delayed Gratification	dual	0.224	<0.001	0.203	<0.001
	Self-Control	dual	0.219	0.001	0.11	0.003
	Meaning in life (Presence)	dual	0.228	<0.001	0.292	<0.001
	Meaning in life (Search)	no				
Satisfaction with Life	no					
Dimensions of Change (Social Network subscale)	Positive Religious Coping	no				
	Negative Religious Coping	no				
	Strength of Religious Faith	no				
	Consideration of Future Consequences	no				
	Consideration of Immediate Consequences	no				
	Grit	no				
	Delayed Gratification	no				
	Self-Control	no				
	Meaning in life (Presence)	no				
	Meaning in life (Search)	no				
Satisfaction with Life	no					

In sum, given the results reported above, we established that positive changes do occur among troubled youth during their time at Zheng Sheng. We also found that many (but not all) of our proposed variables of interest were temporally associated; some variables were associated with the *change* of other variables. Some of such relationships were bi-directional/reciprocal.

Moreover, we examined the mediation model of interest; with delayed gratification as mediator of the effect of religious coping has on life satisfaction. The mediation model did not fit the data.

This prompted us to adopt mixed methods to make a closer examination of the processes underlying such changes. Through our discussion with staff and students at Zheng Sheng, we identified two topics that warranted further elucidation: (1) Understanding Success in Zheng Sheng, (2) Effectiveness of Punishments in Zheng Sheng.

(1) Understanding Success in Zheng Sheng

We were interested in the discrepancies, if any, in how staff and students understood what constituted “success” at Zheng Sheng. 19 interviews (14 students, 5 teachers) were conducted to understand how Zheng Sheng members viewed success in Zheng Sheng. Subsequently, 80 questionnaires (67 students, 13 teachers) were administered to understand the factors contributing to success in Zheng Sheng, as well as their relative importance to (i) self, and (ii) to the institution on a scale of 1 (not important at all) to 10 (very important).

A total of 42 items were derived from the interviews after a process of coding and categorizing codes into themes. These categories include (1) academics as necessary step to reintegration, (2) having a job and establishing healthy working attitudes, (3) obtain life stability, (4) have a clear goal/dream, (5) ability to maintain healthy relationships and communication patterns with family, friends, and romantic partners, (6) decreased criminality, (7) decreased deviant habits and behaviors, (8) have good moral values, (9) establish virtues such as authenticity, perseverance, and humility, (10) active faith/religious practices, (11) increased ability to follow rules, (12) have new perspective and better life attitudes, and (13) better physical and mental health.

Our quantitative questionnaire results indicated that both students and staff viewed academic performance (namely, studying hard, graduating Form six and pursuing future education) as relatively low in importance in their definition of success. We found discrepancies between teachers and students on the importance of religiousness items. “Going to church” was considered of having a relatively low importance among student’s self-ratings. Moreover, “have faith” showed high medians for all three datasets but a strangely low mode of 5 for student general ratings.

Some other interesting considerations were found relating to variables within the theme of criminality and changing habits. For student’s self-ratings, “won’t do criminal activities” seemed particularly important with it being the only factor with a range of 3 within this subset (median = 10, mode = 10, SD = .88). For teachers, the only item with a median of 10 (and mode of 10) was “quit drugs” thus highlighting it as a particularly important indicator of success. Both factors are related to transformation from one’s previous self.

(2) Effectiveness of Punishments at Zheng Sheng

In order to help understand the active ingredients leading to change, we embarked on studying the punishment used at Zheng Sheng. 43 student interviews were conducted to examine the punishments in Zheng Sheng, of which 24 focused on timeout/silence as a form of punishment.

At Zheng Sheng, students follow a strict schedule and lifestyle under the supervision of staff as part of the rehabilitation process. In order to eliminate problematic behaviors, punishment is implemented upon rule violation. Results from the in-depth qualitative interviews revealed that rule-violation incidents included stealing teachers' phone, gambling, swearing, fighting or hitting another student, serving the internet without staffs' permission, and hiding Zheng Sheng's public property.

From our interviews it was revealed that a range of punishments were routinely implemented at Zheng Sheng, including (1) suspension of specific extracurricular activities, (2) taking up extra chores, (3) copying segments from the Bible, (4) engaged with police and further court engagement, and (5) silence punishment.

Due to the uniqueness of silence punishment, further interviews focused on the phenomenology of this specific punishment. In silence punishment, students were told to stay in their own seat for the majority of the time. They were not physically excluded or isolated, but they were not allowed to participate in any activities at Zheng Sheng. They were not allowed to talk or interact with other students, walk around the campus, or go for any activities. Instead, they were instructed to write reflections or read the Bible. Occasionally, they were allowed to go for lessons and do homework. The duration of the silence punishment can range from one day to four months.

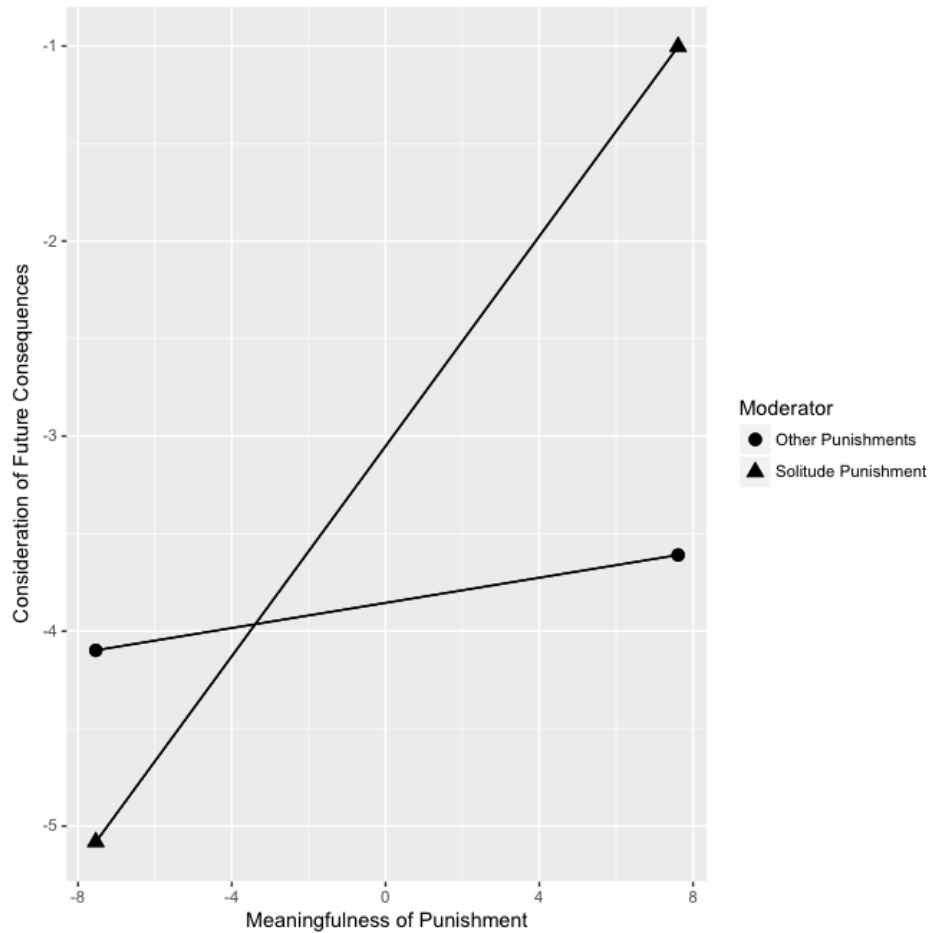
A thematic analysis revealed that the silence punishment facilitated (1) better life attitudes, (2) goal-setting, (3) better self-control, (4) increase in consideration of future consequences, (5) increased sense of personal responsibility, (6) increase in perspective-taking, (7) self-concept clarity, and (8) motivation to change.

Some representative quotes include:

- *"I come to understand, when a person makes a mistake here (in Zheng Sheng), we all bear some responsibilities, because we are a community and we influence one another. In other words, it's impossible to separate others' mistakes from our own businesses, because Zheng Sheng is a big family, and we have the responsibility to help one another."* – Male, 19 years old, 3.5 years at Zheng Sheng.
- *"I realized how my actions affected others. My actions weren't just about me, it impacted others as well. My actions would disappoint those who have expectations on me."* – Female, 16 years old, 0.5 years at Zheng Sheng.
- *"In the process of solitude, I got to reflect on my attitude, inspecting it. Most of the time it is problems with my attitude, rather than the severity of the incident, that leads to the occurrence of the wrongdoings. As such, I need to readjust my attitude."* – Male, 18 years old, 3.5 years at Zheng Sheng.

A follow-up quantitative analysis revealed that meaningfulness of punishment led to an increase in consideration of future consequences ($\beta = 0.19, p = .029$), but not in consideration of immediate consequences ($\beta = -0.09, p = .385$). Furthermore, we found that the form of punishment was a moderator between meaningfulness of punishment and consideration of future consequences ($\beta = 0.28, p = .05$). In solitude, meaningfulness of punishment predicted the increase in future consequences, but not in other punishments (Figure 18).

Figure 18. Meaningfulness of punishment predicting consideration of future consequences for different forms of punishment.



Project slippage

In the proposal, we estimated for approximately 250 participants to have participated in the quantitative survey by the end of the study. However, there has been a decreasing rate of newly-admitted youths into Zheng Sheng. As the number of youths at Zheng Sheng continue to decrease, we are only able to obtain data from 96 participants in total with a response rate of 95% (i.e. this has met and exceeded our proposed 85% compliance rate). Today, Zheng Sheng has only around 30 youths remaining in the program. To resolve this issue, we increased the number of qualitative interviews from 20 to 45 in order to better understand the change processes in Zheng Sheng.

Comparing Zheng Sheng to other residential treatments

We compared Zheng Sheng to other residential programs, local and overseas. We found that Zheng Sheng's treatment model is unique in its approach. Although Zheng Sheng has a religious

background, the staff do not focus on converting their students to Christianity. The youth instead are given ample opportunities to read the Christian Bible and participate in religious activities. Contrastingly, many residential treatment programs with a religious background place religious conversion as the core of their treatment model e.g., Teen Challenge programs in the United States and Operation Dawn in Taiwan. Despite the program's differing approach, the youth in Zheng Sheng has shown positive growth in religious faith and positive religious coping across their stay in Zheng Sheng. Literature reported that religious conversion is the strongest predictor of length of stay in the treatment and completion of treatment (e.g. Chu, Sung, & Hsiao, 2012). Upon the insight brought about by the literature, we can consider further investigation on the impact of religious beliefs. For instance, whether those converted to Christianity show a better progress in the treatment, and whether having converted to Christianity would affect the treatment effectiveness in drug relapse after they completed the treatment program. We can also explore whether positive religious coping is effective to help prevent them from relapsing to drugs. Though a handful of research studies have been done on the religious rehabilitation programs in Hong Kong, they did not examine similar theoretical models as we did, nor did they examine the research insights we described above. One of the articles only examined how an individual's identification with Jesus turned the person into a moral, tender, compassionate, and self-reliant individual (Ng, 2010); while another compared participants of wider age range from various rehabilitation programs, which has only 30-40 participants coming from religious programs, and examined variables that differed from ours, with life satisfaction being the only variable in common (Cheung, Y., & Action Committee Against Narcotics, 2003). We might consider further investigation on the effect of religious belief and religious coping with different therapeutic communities (TCs), not only Zheng Sheng, that incorporate religious components in the treatment programs, for example, Barnabas Charitable Service Association, Christian New Being Fellowship, Operation Dawn, St Stephen's Society, Finnish Evangelical Lutheran Mission, and so forth.

The unique treatment model of Zheng Sheng, having passionate and devoted teachers to mentor the youth and build the community together, with attitudes teaching and religious influence, on a remote island, is worth further investigation of effectiveness. This unique treatment is not unlike common therapeutic communities (TCs) as stated in a meta-analysis report (Mitchell, Wilson, & Mackenzie, 2007); that common core component of the TC model is that participants are instrumentally involved in running the TC, e.g. monitor other residents for rule compliance, resolve disputes. Youth in Zheng Sheng are guided by mentors along the treatment stay while they learn to take care of other fellow residents. They grow to realize they are building the community together and hence they share the responsibilities. The sacrificial act of mentors, who leave their family in the city, to spend the majority of their time with the youth on a remote island, makes this treatment model invaluable and unique. It is not possible to compare it to another residential programs as a whole, but we can consider taking in other valuable factors to further investigate the model in our future research. Besides the religious components on drug relapse mentioned above, we might also consider taking the factor of adherence to the program of each youth into account to examine if this associates or impacts the post treatment effectiveness among youth. For example, Garner et al. (2007) reported that greater adherence to continuing care is associated with a reduction in environmental risk and, in turn, reduction in drug-related problems 9 months after leaving the residential treatment program.