An Empirical Assessment of the Effects of Cohort Training and Follow-Up on the Outcomes of Short-Term Missions

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Abstract

This study seeks to develop an understanding of the role that training can play in the effectiveness of short-term mission trips for participants. The study is based upon a randomized control trial implemented among short-term teams coming to Chattanooga for training during the summer of 2014. It measures the particular effects of training on participants' theoretical cognition by examining their responses to surveys administered immediately preceding and following the week-long short-term trip. The need for this study is evidenced by the lack of research on this topic, despite the continued popularity of short-term mission trips for churches.

The data set draws primarily from responses to pre-trip and post-trip surveys, and qualitative data were quantified by the researchers to implement regression analysis of the data. The primary regression method is OLS. Multiple dependent variables are evaluated, identifying the prevalence of responses associated with relational and structural elements of poverty, identification of community assets, self-identification with poverty, identification of poverty in one's home community, and a desire to increase involvement in one's home community.

The results of the analysis find positive and statistically significant effects of training for short-term participants on all variables except that of expressing desire to increase involvement in one's home community. While further research in this area is necessary, we believe that this research provides a foundation for ongoing work.

Key Words: service learning, cross-cultural engagement, volunteering, short-term missions, community engagement

Short-term mission (STM) trips have been growing in popularity recently. Peterson (2007) reports that in the United States, there were 120,000 participants in 1989, 450,000 in 1998, 1 million in 2003, and 2.2 million in 2006. Wuthnow and Offutt (2008) cite a more modest figure of 1.6 million in 2006, likely because they only counted transnational trips. Research from a national survey by sociologist Christian Smith suggests that 29% of all 13- to 17-year-olds in the United States have "gone on a religious missions team or religious service project," with 10% having gone on such trips three or more times (Priest and Ver Beek 2005a). The increased demand for these trips is facilitated by hundreds, perhaps thousands of Christian mission organizations engaging in and promoting a variety of short-term service projects. The most common destinations are Mexico, Panama, Guatemala, and Nicaragua, due to their relative proximity to the United States and perceived economic need (Priest and Priest 2008; Fogarty 2009; Trinitapoli and Vaisey 2009).

Using the 2003 National Survey of Youth and Religion, Johnson (2013) found that the typical Christian young person that participates in these religious initiatives is female (55.2%), white (69.8%), Protestant (74.1%), and from a relatively affluent family. While "short-term missions" is a term often used to represent any mission experience lasting less than two years, a survey by Priest, Dischinger, Rasmussen, and Brown (2006) reports that a majority of such trips last fewer than two weeks.

While growing in popularity among church youth groups, these shorter trips are also popular among adults (Trinitapoli and Vaisey 2009). Various religious affiliations participate in these trips, with the highest rates of participation in the following order: Mormons, mainline Protestants, conservative Protestants, and black Protestants (Smith and Denton, 2005). These trips usually include around 20 participants, although the number can vary greatly (Trinitapoli and Vaisey 2009). In 2006, the average trip cost approximately \$1,000 per person, not including airfare (Wuthnow and Offutt 2008). Also in 2006, an estimated \$1.6 billion was spent on shortterm mission trips (Peterson 2007). In addition to the financial cost, a significant time commitment is involved (Wuthnow and Offutt 2008). Tens of millions of person-days were invested in these trips.

Activities performed on trips include supporting outreach of long-term missionaries, worshipping with local populations, learning a foreign language, studying the local culture of a destination, sponsoring summer camps for youth, painting homes, delivering medical supplies, or meeting with community leaders (Beyerlein, Adler, and Trinitapoli 2011). These activities can be summed up as charitable service work, learning about cultural and social justice issues, and engaging in evangelism (Beyerlein et al. 2011).

It appears that STM trips are often motivated by more than simply a desire to have a positive impact on the areas visited. Beyerlein et al. (2011) point out that many churches aim to "transform members' attitudes and behaviors about economic, political, and social issues"

(781). Other motivations given by trip leaders include promoting altruism, showing solidarity with others, or having an adventure (Fogarty 2009; Priest and Ver Beek, 2005b).

While STM trips may have significant effects on participants, it is important to recognize the difficulty in measuring these effects accurately. Often-cited benefits of participation in such trips are long-term financial commitment to mission work and becoming long-term missionaries. Other studies indicate that STM trips have a positive impact on participants as an agent of socialization and exposure to new ideas and cultures (Trinitapoli and Vaisey 2009). Trinitapoli and Vaisey (2009) find that participation increases adolescents' religious beliefs and practices. Research also shows that these trips may increase domestic civic engagement, especially in regards to volunteer religious work (Beyerlein et al. 2011). Finally, participants display less ethnocentrism than non-participants (Priest et al. 2006), and score higher on the Global Social Responsibility Inventory (Hopkins 2000).

In his 2009 study of STM trips, Fogarty examined the peace movements of Central America in the 1980s. Religious delegations traveled to rural areas, stayed in local homes, and experienced drastically different work routines and living conditions from their own. Participants learned about the United States' political involvement in the civil wars that plagued Central American countries, saw the suffering of the local population, and worshipped together with them. As a result, participants became more socially and politically involved upon returning to the U.S.

Criticisms of Short-Term Missions

Although there is some support in the research literature on the subject for the benefits of short-term mission trips, more studies offer criticism of such religious initiatives. Among their claims are that participants do not necessarily donate more to international charitable works (Ver Beek 2006; Priest et al. 2006), participants may benefit more than their hosts (Trinitapoli and Vaisey 2009), and the long-term effects claimed by others are questionable (Ver Beek 2006; Trinitapoli and Vaisey 2009). Randall Friesen (2004), in his dissertation research on short-term missions, says that short-term missions may actually contribute to the Western tendency toward ethnocentrism, directly countering the argument stated above that participants possess lower levels of ethnocentrism (Priest et al. 2006). Others counter the claim that STM trips provide intercultural exposure, saying that the interaction between locals and participants actually takes place on a "staged tourist space" (Slimbach 2000). Furthermore, the inequality exhibited in the relationships between participants and hosts has led others to describe the phenomenon as "benevolent colonialism," "disabling help," or "malevolent generosity" (cited in Friesen 2004:4).

Corbett and Fikkert (2012) discuss at length the unintended consequences of short-term mission trips in their book, When Helping Hurts. They point out that a major concern regarding these trips is participants' lack of cultural competency regarding the host culture and the damaging effects this can have on the host community. For example, they argue that North Americans are from an extreme culture in that they hold strong notions of individualism. North Americans also place an emphasis on a monochronic perspective of time as being a valuable and limited commodity compared to a less time-focused, polychronic perspective in many other cultures.

Furthermore, since such trips usually take place in developing countries or areas of the United States that are economically poor, the strategies for poverty alleviation often place the North American participants in a dominant position as the ones who have "something" to give to those who have "nothing." This leads to a focus on bringing in resources from the outside rather than identifying and mobilizing the often stronger resources the community possesses internally. In so doing, participants may show a paternalistic perspective and undermine local assets, perpetuating both feelings of superiority among participants and feelings of inferiority among their hosts. Thus, the authors conclude that the best situation is for short-term participants to partner with a local ministry or organization that is already implementing a longterm, asset-based, development approach (Corbett and Fikkert 2012).

Conceptual Model

The contexts in which short-term missions occur are multifaceted; a short-term mission experience is a nexus of interactions between usually very different parties. Volunteers on a mission trip come from a particular community. They likely partner with an organization with a specific social placement which is implementing programs and projects that serve various individuals from a community different from that of the volunteers. From a research perspective, one can choose to look at numerous possible outcomes for volunteers and their communities, host organizations, and the individuals and communities that host them. These outcomes will vary depending on the attributes and capacities of all parties involved and on the goals and nature of the short-term experience itself. Reading from left to right, Figure 1 represents the factors that influence the possible outcomes of a short-term mission experience.

Figure 1

<u>Attributes</u>	<u>Capacity</u>	<u>STMExperience</u>	<u>Outcomes</u>
Volunteer Socio-Demographic Attributes Education	Volunteer©apacity Knowledge@nd®kills		Volunteer Dutcomes Intercultural competence
Nationality, lethnicity, lend lend lend lend lend lend lend lend	Motivation@nd@ffort		Civic@ndl@lobal@ngagement International@nowledge@ndl@
Disability Gender	Prior®olunteering®xperience Prior®ultural®xperience		understanding Increased®ocial®apital
Age	Time		Reputation®enefits Community®pillovers®f@ny®f®
Incomelandlassets			these
Employment\(\mathbb{B}\)tatus		STM®Action Service®activity	Host@rogram@utcomes_
Program@Attributes	Program ® Capacity	Length@nd@continuity@fill service	Direct≸unding
Typelloflorganization	Physical Pesources	Group@r@ndividual@ervice	Future funding Relationship with sending
Mission@nd@oals	Social@esources	Direction@nd@versight	communities Relationship®with®host®
Sponsorship	Access	Cross-cultural@contact	community
Costs@ndfunding	Incentives	Community@participation	Increased®capacity
Size	Training		
Recruitment@policies	Support@nd@upervision		
	OrganizationalMetworks		
Host Community Attributes	Host@Community@Resources		Host@community@utcomes Social,@conomic,@eligious@
Geography	Financial Pesources		conditions Intercultural knowledge and 2
Education@evels Nationaility,@thnicity,@and@	Physical™esources		skills International®nowledge@nd@
religion	Political⊞esources		understanding
Income@and@assets	Community®tructures		International@connection
	Connectivity		Individual Belf-perception
	Social®tability		Community/Belf-perception

(adapted from Sherraden, et al.)

Attributes refer to the socioeconomic, demographic, environmental, and structural conditions for sending and receiving communities as well as hosting organizations. Capacities refer to the specific knowledge, skills, and attitudes of those in each sector, indicating the ability of those in each group to enact the change that they desire. The relationship between attributes and capacities is strong as well as dynamic. The fact that volunteer and host groups face drastically different opportunity sets further influences the power dynamic. A group of volunteers has multiple options for whether to participate, where to travel, and with whom to partner. A host community may have only one option for assistance from an outside organization. The organization coordinating the trip, often with its own vested financial interest, will likely need to accommodate the interests of the volunteers more than the interests of the host community.

In addition to the pre-existing characteristics of all of those involved in the short-term mission experience, the nature of the service itself is an important factor influencing the potential outcomes. Short-term experiences can vary dramatically in structure, including whether volunteers work individually or in groups, whether the work is predominantly

evangelistic or economic, the length of the experience, and the type of oversight the host organization provides.

Finally, there are a variety of potential outcomes from a short-term missions encounter. These are experienced uniquely by team members, host organizations, and host communities. Spillover effects likely occur from each of these as well. Ideally, outcomes are beneficial for each group, although nothing guarantees that benefits are equally distributed. Given asymmetrical relationships of power and resources, it is certainly possible that some groups receive no benefit whatsoever, or even experience negative outcomes. In many ways, the debate over short-term missions is about the magnitude and distribution of benefits across these groups.

Research Design

There are several potential areas for fruitful research regarding short-term missions. This research project explores a niche that has not been explicitly addressed in the literature. While focusing on volunteer outcomes, it does not compare the impact of a short-term missions experience on those who participate with those who do not. Instead, it addresses the question of how structured preparation and reflection affect those involved in short-term trips. For the STM experience to be beneficial for all parties involved, it is necessary to understand better the factors that lead to long-term growth for both participants and host communities. Multiple authors suggest that training can be an essential component that must be employed if STM trips are going to have a positive long-term impact (Friesen 2004; Corbett and Fikkert 2012).

Theoretically, it makes sense that training can be very helpful in ensuring that shortterm trips have a positive long-term impact. Yet very little empirical research has been done to measure the value of training for short-term mission trips. Friesen (2004) found that pre-trip discipleship training had a positive impact on the spiritual development of those on STM trips. Tuttle (1997) demonstrated that quality training and debriefing can have a significant positive impact on the spiritual growth of STM participants. However, both papers focus only on the spiritual development and training of STM teams, and few other projects directly address the effects of training.

The Chalmers Center for Economic Development at Covenant College, Georgia, has developed a training curriculum for STM trips to be administered before, during, and after the trip. The curriculum equips participants with an understanding of poverty that focuses on more than just material deficits, and helps to lead participants away from paternalistic and ethnocentric views that tend to be prevalent on STM trips. For this research project, we modified the training program to make it applicable to teams going to an urban environment in the United States, and to allow the training to be administered during the week that teams were in Chattanooga.

Controlling for External Variables

This research employs a three-part strategy to control for external variables, two based on the research design and a third based on regression analysis. First, the research employs a randomized control experiment of participants in STM trips to account for variance in the participants' knowledge and capacity. The participants in the study were randomized based on the week in which they came to Chattanooga. There were nine total weeks of STM trips included in the study, four of which received the training. Each week of trips consisted of multiple church groups. In total, over 400 participants from 29 different churches took part in the experiment.

Second, this study intentionally looks at groups coming through the same host organization to account for variance that is inevitably present between the resources, training, and attributes of different host organizations and communities. Finally, an initial survey was given to create additional independent variables able to identify and control for any remaining differences through regression analysis.

Treatment

Teams in the experimental group were provided training materials with instructions for leading group discussions. These training sessions started with a video, followed by both individual and group reflection questions. Completion of the discussions is sequenced, with some before, some during, and some after the mission trip. The researchers communicated with teams prior to the trip and oversaw the on-site portion of the training to ensure its completion.

Teams that were selected to receive the training program were given the training during the week that they were in Chattanooga. All teams arrived on Saturday and went through a separate, unconnected training conducted by Hope For the Inner City and New City Fellowship on the following Sunday. For the teams that were selected to receive the Chalmers training, the first two training sessions usually took place on Monday evening, and a third session would take place on Wednesday afternoon during a free period in the schedule. A final session that consisted of both training and debriefing would then take place on Friday, when teams had completed most of the week's projects.

Assessment

Two primary surveys were used to compile data for empirical assessment. At the outset of the trip, each participant and team leader was given an Opening Questionnaire (see

Appendix A), which was designed to tease out some of the independent variables (outside of the training) that might contribute to varying outcomes of the trip for different people. Subsequently, the same individuals were given a Final Survey (see Appendix B) at the end of the week during the debriefing session, and were asked five questions designed to assess the cognitive and pragmatic effects of the STM trip. The quantified results of the Final Survey will be the dependent variables in the empirical analysis of this study.

Empirical Analysis

Dependent Variables

Several dependent variables are used in the empirical analysis to provide a robust understanding of the effects of the training on outcomes for participants. Participants responded to a set of reflection questions. Four dependent variables are derived from these questions seeking to identify the extent to which participants refer to the multiple facets of poverty. Each of the dependent variables is discrete, with four possible outcomes: 0, 1, 2, or 3. These outcomes correspond to whether the participants answered in a certain way in 0, 1, 2, or 3 of their responses (see Appendix B for context).

Dependent Variable #1 - PrimaryLessons

The dependent variable in the first regression is titled PrimaryLessons and is derived from the first question on the Final Survey: "What are three main things that you learned during your time in Chattanooga?" The data were quantified using dummy values to denote whether a person mentioned one of two aspects in each part of their response: (1) assets in the host community, and/or (2) a view of poverty alleviation that seeks to empower materially poor people. This variable aims to show the extent to which participants began seeing the people in the materially poor neighborhoods they visited as human beings with their own knowledge, agency, and abilities.

Dependent Variable #2 – Self Poverty

The second regression examines whether participants began to identify some of the stereotypes they associate with poverty in their own lives. The variable was created using results from Question 3 on the Final Survey: "As you reflect on your time in Chattanooga, what are three ways that you think differently about yourself?" This variable identifies the extent to which respondents identify elements of relational poverty in their own lives after the trip, as opposed to merely seeing themselves as having solved the problems of the community.

Dependent Variable #3 - CommunityAct

The third dependent variable, based on Question 4 of the final survey – "Are there any ways that you think differently about your home community based on your time here?" identifies whether a person subsequently desires to participate in some sort of poverty

alleviation in their home community. This variable obviously does not show a person's actual changed civic engagement. Rather, it simply reveals whether a participant shows an initial desire to increase community engagement following the trip.

Dependent Variable #4 - CommunityPov

The fourth dependent variable is also based on the fourth survey question, identifying whether a person directly communicates a specific awareness of the existence of poverty in his or her home community. Like the variable Self Poverty, this variable hopefully shows whether the training helped participants to see the poverty present in their own home contexts. Rather than simply identifying a person's desire, this also assesses whether they were able to apply the framework correctly when considering their home community.

Independent Variables

Primary Independent Variable: Training Group

The independent variable of the greatest interest to this paper is a simple dummy variable indicating whether a participant received the training curriculum during their STM trip. The primary purpose of the paper is to assess the extent to which this variable is correlated with the dependent variables.

Control Variables Based on the Opening Questionnaire

Most of the additional independent variables included in the regression analysis come from the STM participants' responses to questions in the Opening Questionnaire given at the beginning of each week. These will be employed to ascertain the extent to which differences among individuals' demographics, knowledge, and setting prior to the trip affect their answers at the end of the week.

First, demographic factors are considered. A dummy variable for the sex of the participant assesses whether males and females tend to be affected in different ways during the STM week. We consider whether the participant was a leader, as leaders will most likely be more mature and may tend to have different responses to questions at the end of the week. The age of participants is also considered, in part to determine the value of bringing younger members on STM trips. A final demographic variable is used for how many times participants attend church weekly.

Second, we employ variables that attempt to assess the exogenous knowledge and/or experience of participants prior to the week's training. A variable concerning the number of previous STM trips a participant has gone on is used to determine the effect of prior experience on current results. A second variable identifies whether the student has been on a STM trip to Chattanooga before. We utilize a variable based upon the official poverty rate in the zip code of each church as a proxy for a participant's exposure to poverty in their home community. These data are drawn from Census Bureau data.

A dummy variable will consider whether the participant's family supports any missionaries. We also consider how many times participants have volunteered in the past year and how many cross-cultural interactions they have weekly, as these things may affect their social and missional engagement outside of this specific STM trip.

Table 2: Independent Variables (* indicates if it is a dummy variable)

<u>Variable</u>	<u>Variable Name</u>	<u>Description</u>	
Training Group	Experimental or	* Whether the participant received the	
	Control Group	training	
Age	Age	Age of Participant	
Male	Male	* 1 if Male or 0 if Female	
Leader	Leader of Trip	* Whether the participant was a leader on the trip	
NumTrip	Number of Previous Trips	How many previous STM trips has the participant been on?	
ChurchAtt	Weekly Church Attendance	Based on 1-4 scale (see Appendix A), how often does the participant attend church weekly?	
PoorEst	Estimated Percentage Poor	Based upon participants' responses to how many people are in poverty in their home community	
FamMiss	Family Missionaries Supported	* Whether the family of the participant supports additional missionaries (known by participant)	
CCI	Weekly Cross- Cultural Interaction	On a scale of 1-3 (see Appendix A), how often does the participant interact with another culture?	
PoorHome	Home Poverty Rate	What is the poverty level in the home church's zip code?	
ChattTrip	Previous Chattanooga Trip	Has the participant been on a STM trip to Chattanooga before?	

Data Set

The data set used for empirical regression purposes is limited to the data taken from the Opening Questionnaire and the Final Survey found in Appendices A and B. (Additional data drawn from debriefing sessions, observation at trainings/meetings, and surveys given to some leaders are available for further research, but are not used in this study.) Table 3 includes descriptive statistics for each of the independent variables. They are given separately for the

total population, the control, and the experimental group so as to identify differences between the populations that persist despite randomization. The control and experimental groups differ with regard to two variables at the 5% level. The experimental group is slightly older than the control group, although more than half of this difference is driven by the age of group leaders. The experimental group also comes from areas with a 3-percentage-point lower poverty rate on average.

Table 3: Summary Statistics for Independent Variables

<u>Variable</u>	<u>Total</u>	<u>Control</u>	<u>Experimental</u>
	Mean	Mean	Mean
	(Std. Dev.)	(Std. Dev.)	(Std. Dev.)
Age	19.56	18.73	20.91
	(11.07)	(10.53)	(11.79)
ChurchAtt	3.60	3.64	3.53
	(0.61)	(0.58)	(0.64)
Home Poor	11.69	12.80	9.82
	(8.41)	(9.42)	(5.89)
CCI	1.99	2.03	1.93
	(0.81)	(0.80)	(0.84)
MatWds	1.55	1.57	1.51
	(1.24)	(1.28)	(1.19)
RelWds	1.45	1.37	1.47
	(1.33)	(1.32)	(1.35)
Female	0.53	0.53	0.54
	(0.50)	(0.50)	(0.50)
FamMiss	0.59	0.61	0.56
	(0.49)	(0.49)	(0.50)
Prev Trip	0.69	0.69	0.68
	(0.46)	(0.46)	(0.47)
ChattTrip	0.24	0.31	0.12
	(0.43)	(0.46)	(0.32)

Analysis of Means

The research question being addressed is whether and to what extent Short Term Mission team participants who receive outside training demonstrate different outcomes at the end of their trip. Figure 1 and Table 4 below shows these results. Analysis of the data indicated that the unconditional means of all four dependent variables are higher for the training groups, with the values being statistically significantly higher at the 1% level for three out of the four variables – Primary Lessons, Self Poverty, and Community Poverty. The difference between the groups regarding Community Act was not significant at any level.

Figure 2

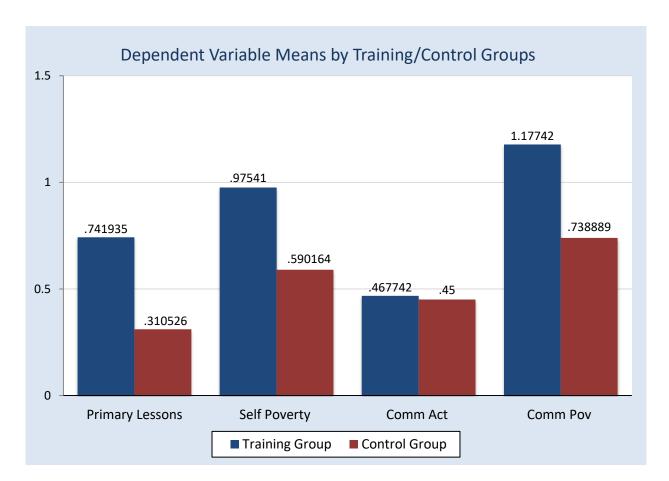


Table 4: Unconditional Means for Dependent Variables

<u>Variable</u> <u>Control</u>		<u>Experimental</u>	<u>T-Score</u>
	Mean	Mean	
	(Std. Dev.)	(Std. Dev.)	
Primary Lessons	0.481	0.742	5.39
	(0.77)	(0.60)	***
Self Poverty	0.590	0.975	4.51
	(0.85)	(0.90)	***
Comm Act	0.45	0.47	0.22
	(0.80)	(0.79)	
Comm Pov	0.74	1.18	4.39
	(0.93)	(0.93)	***

Regression Analysis

To further control for explanatory variables that may not have been equalized by the randomization process, four key regressions will be run using OLS. The four regressions will use the same independent variables to explain each of the dependent variables – Primary Lessons, Self Poverty, Community Act, and Community Pov. Each OLS regression is given by the following specification:

Dependent Variable = θ_0 + θ_1 Training Group_i+ θ_2 Age_i+ θ_3 Female_i+ θ_4 Leader_i+ θ_5 NumTrip_i+ θ_6 ChurchAtt_i+ θ_7 PoorEst_i+ θ_8 PoorHome_i+ θ_9 FamMiss_i+ θ_{10} Vol_i+ θ_{11} CCl_i+ θ_{12} MatWds_i+ θ_{13} ReIWds_i+ θ_{14} ChattTrip_i+ ε_i

A table giving the expected sign of each coefficient appears in Appendix D.

In considering multicollinearity, we ran a Variance Inflation Factor (VIF) test on the independent variables and identified no substantial multicollinearity between variables using standard thresholds. (The results are shown in Appendix C.) Each regression was also tested with a White Test to identify the potential presence of significant heteroskedasticity, and none was identified. Table 5 gives the results from the regressions associated with each of the dependent variables.

Table 5: Regression Results

Variable	Prayer	Primary	Self	Community	Community
		Lessons	Poverty	Action	Poverty
Training Group	0.036	0.406***	0.510***	0.139	0.507***
	(0.027)	(0.109)	(0.125)	(0.119)	(0.094)
Age	0.001	0.014**	0.008	0.023***	-0.005
	(0.745)	(0.006)	(0.912)	(0.007)	(0.009)
Male	0.065**	-0.076	0.214*	-0.058	0.051
	(0.012)	(0.103)	(0.119)	(0.114)	(0.150)
Leader	-0.063	0.149	-0.297	-0.212	0.043
	(0.296)	(0.246)	(0.295)	(0.265)	(0.348)
Poor Estimate	0.000	-0.001	-0.001	-0.002	-0.003
	(0.872)	(0.004)	(0.004)	(0.004)	(0.005)
Poor Home	0.002	0.003	-0.011	0.008	0.000
	(0.415)	(0.010)	(0.011)	(0.010)	(0.138)
Church Att.	0.016	0.029	0.040*	0.206**	-0.052
	(0.101)	(0.088)	(0.022)	(0.097)	(0.127)
CCI	0.011	-0.114*	0.086	0.106	0.095
	(0.047)	(0.062)	(0.072)	(0.068)	(.089)
MatWds	-0.021*	0.052	0.011	0.102**	-0.035
	(0.078)	(0.047)	(0.402)	(0.053)	(0.069)
RelWds	-0.013	0.094**	0.092*	0.107	0.078
	(0.254)	(0.047)	(0.055)	(0.052)	(0.068)
ChattTrip	0.098***	-0.009	0.076	0.121	0.017
	(0.003)	(0.130)	(0.150)	(0.144)	(0.189)

The regression model used for the dependent variable Primary Lessons demonstrates a notable positive coefficient and statistical significance at the 1% level. Additionally, the coefficient is positive at a meaningful magnitude of 0.406 given the small range of the dependent variable (0-3) and a mean of less than 1.

In the regression regarding the variable Self Poverty, the coefficient value is again decidedly positive at 0.510. This is quite substantial given the mean of less than 1 for the dependent variable. This correlation is significant at the 1% level.

As we saw with the unconditional means, the regression with the dependent variable CommunityAct, measuring those who demonstrate on the final survey a desire to do some type of additional poverty alleviation work at home in the future, found no significant effect from training. While the β_1 value is once again positive, the magnitude of the coefficient is not substantial, and the t-score does not suggest statistical significance.

The dependent variable for the final regression is Community Pov, which indicates whether participants began to recognize poverty in their home communities by the end of the STM trip. Again, the coefficient value is strongly positive with a coefficient estimate of 0.507, statistically significant at the 1% level.

Conclusions

The effects of short-term mission trips on the people who go on them are multi-faceted and likely differ between the short and long run. This study makes a modest contribution to our understanding of what this might look like. First, it does not seem that the STM training has a significant effect on the immediate desire of STM participants to engage in their communities back home. This is not surprising, because reflection on the experience of a STM trip may broaden one's view of poverty, one's understanding of the factors that contribute to it, and one's position regarding it. This would likely give an individual more pause about responding quickly with more service in the future. If true, this may suggest that STM experience may actually lessen the possibility of future service by revealing how complex and difficult effecting lasting change may be. Therefore future research should examine whether there is a long-run difference in STM and community engagement.

Second, the effect of the STM training on the level of poverty students recognize in their home communities after the trip is debatable. The relatively high positive coefficient is significant to reject the null at the 10% level of confidence, but not at the 5% level of confidence. Therefore, we can reject the null at a 10% level of confidence and conclude that the training does seem to be correlated with participants seeing poverty in their home communities. Nevertheless, further research would certainly be useful for verifying these results as well.

Third, the research does show that there is demonstrable empirical evidence that participants on those teams that received the STM training program were more likely to observe assets in their host communities and to prefer a way of doing ministry that empowers the community in the long-term, rather than just addressing immediate material needs. The highly positive coefficient is statistically significant in this regression, and we can see that there is clearly a positive relationship between the variables.

Fourth, the research also yields strong empirical evidence that STM teams that received training are more likely to see the attributes associated with poverty in their own behavior. This is an important step in beginning to move toward poverty alleviation that empowers the poor,

and away from the god-complex that is common among Western STM trips. Training was indeed effective in helping participants see this.

Overall, this research suggests that there are clear, short-run cognitive effects of receiving training surrounding a short-term mission trip in the areas of participants recognizing poverty within themselves, beginning to show inclinations toward seeing members of poor communities as capable actors with skills and abilities and doing empowering ministry in communities of material poverty, and possibly recognizing poverty within their home communities as well. While these results are encouraging, they do not address whether these cognitive recognitions persist over time or whether they translate into behavior. Further study needs to be done concerning the effects of the STM training program on the long-term engagement of the participants. Therefore a second round of the project is currently underway to add to the results of this study and hopefully strengthen the significance of its findings by examining the long-term engagement of STM students in poverty-reduction action.

Participation in short-term mission trips is expected to continue to grow. Therefore it is necessary that more research be conducted regarding the impact of these trips on participants. While it cannot be concluded exactly how short-term mission trips affect participants, this remains fertile ground for exploration. Contact with diverse groups through a short-term mission trip experience may indeed lead to several attitudinal changes as noted above. Furthermore, Trinitapoli and Vaisey (2009) believe that this increased contact has the potential to either reduce or intensify the stereotypes and attitudes that both participants and host community members have towards race, ethnicity and religion. Nevertheless, scant research is available to confirm this, and thus the need for more rigorous, scientific methodologies to determine the real impact on participants. Hopefully this research will contribute to a more critical and informed perspective on these growing religious initiatives.

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Acknowledgments:

Our thanks go to Lindsey Huang at the University of North Texas for assistance in the foundation of this project, Katie Casselberry of the Chalmers Center for Economic Development for assistance with developing the training materials for the teams, and Paul Green, Victoria Yang, Dorrit Zeigler, and Juliana Meznar for their assistance coordinating with host sites and ensuring data collection. We also appreciate outstanding comments from reviewer Andrew Sanders.

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Appendix A: Opening Questionnaire

1.	How old are you?
2.	What is your gender? M F
3.	Have you ever been on a mission trip before? Yes No a. If so, how many? b. If so, where have you been?
4.	How often do you attend church or other service or group from your church in an average month?
	Less than once 1-3 times 4-6 times More than 6 times
5.	What is the main reason that you want to go on this trip?
6.	What are you most excited about with regard to this trip?
7.	Is there anything that you are nervous or worried about with this trip?
8.	What are the first five words or phrases that come to your mind when you think of poverty? a. b. c. d. e.
9.	If you had to describe the purpose of this short-term trip in one sentence, what would it be?
10.	What are some of the key things that the Bible says about the poor?
11.	What are some of the key things that the Bible says about the rich?
12.	What percentage of people in your community would you say are poor?

- 13. What are the key sources of poverty around the world?
- 14. What are the key sources of poverty in the United States?
- 15. What are some of the main ways to reduce poverty?
- 16. How many missionaries does your church support? What are some of the places where they serve?
- 17. Do you know if your family directly supports any particular missionaries or ministries outside of your church financially or in prayer? If so, do you know where they serve?
- 18. What kind of outreach does your church do in your community?
- 19. In the past year, how many times have you volunteered to work for your church or for some other charitable organization?
- 20. How often do you interact with someone from another culture (circle one)? Less than 1x per week 1-2 times per week 3 or more times per week

Appendix B: Final Survey

1.	What are three main things that you learned during your time in Chattanooga? a.
	b.
	c.
2.	If you could magically change three things about the community you saw in Chattanooga, what would they be? a.
	b.
	C.
3.	As you reflect on your time in Chattanooga, what are three ways that you think differently about yourself? a.
	b.
	C.
4.	Are there any ways that you think differently about your home community based on your time here? List the top three. a.
	b.
	C.
5.	List three ways that you think that your time in Chattanooga impacts your Christian life? a.
	b.
	C.

Appendix C: VIF's

VIF Test for Multicollinearity

Variable	VIF	1/VIF
Leader	4.81	0.207739
Age	4.76	0.209868
BibRich2	2.62	0.382385
BibRich1	2.58	0.387928
BibPoor2	2.08	0.481861
BibPoor1	1.92	0.520494
RelWds	1.89	0.529752
MatWds	1.76	0.569084
BibRich3	1.59	0.627492
BibPoor3	1.59	0.630813
PoorEst	1.47	0.678860
Training Group	1.41	0.710532
Vol	1.40	0.715776
PoorHome	1.38	0.723122
ChattTrip	1.24	0.807102
ChurchAtt	1.21	0.826331
Female	1.18	0.844008
FamMiss	1.12	0.894047
CCI	1.09	0.913859
Mean VIF	1.95	

Appendix D: Hypothesized Signs for Independent Variables

<u>Variable</u>	Expected Sign	Explanation of Expected Sign
Training Group	+	The training received is hypothesized to increase the likelihood of each of the responses.
Age	+	Participants who are older are presumably more mature and better at retaining information
Male	+/-	No Prediction
Leader	+	Leaders will hopefully have greater ability to consider issues of poverty being discussed, largely due to experience
NumTrip	+	Greater number of STM trips will mean more past experience
ChurchAtt	+	Greater church attendance would possibly lead to a more formed theological foundation for poverty issues
PoorEst	+	Seeing more people as poor in one's own community could indicate that the participant has begun to recognize different types of poverty
FamMiss	+	Participants whose families support missionaries will theoretically have greater prior access to knowledge about poverty issues
Vol	+	Participants who volunteer more during the year will probably have had more experience with poverty, or the church.
CCI	+	Higher cross-cultural interaction indicates a greater desire for relationships with people outside one's own community
MatWds	-	Participants who use more material words to describe poverty prior to the trip will be more likely to continue to do so
RelWds	+	Participants who use more relational words to describe poverty prior to the trip will be more likely to continue to do so
ChattTrip	+	If the participant has been to Chattanooga before, they will have a greater possibility of being familiar with the materially poor community here and have more experience with poverty
HomePoor	+	Theoretically, a person will have had a greater chance to interact with poverty in their home community