

Using Experience Sampling Method (ESM) to Assess Cognitive and Affective Engagement of Youth Volunteers at a Children's Museum

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Abstract

The present study sought to utilize Self-Determination Theory (SDT) to expand upon pre-existing research on youth volunteerism and examine how youth volunteers at a children's museum express cognitive and affective dimensions of their volunteer experiences. Incoming motivations and expectations were also examined for their effects on volunteer engagement and satisfaction. This study utilized event-contingent cueing through Experience Sampling Method (ESM) to explore patterns of self-determined behavior. Multiple ESM surveys and a background survey were collected from 14 youth volunteers who worked as Play Assistants or Museum Assistants to create volunteer profiles. Results demonstrate a predominantly positive volunteering experience, as expressed through high survey ratings on autonomous, competency, and relatedness indicators. Further, a potential interaction involving incoming expectations and motivations and current museum experiences is apparent when comparing specific volunteer profiles, perhaps explaining for contrasting levels of satisfaction between volunteers. Implications, limitations, and future research questions are discussed.

Keywords: Youth Volunteers, Self-Determination Theory, Experience Sampling Method

1. Introduction:

Because many individuals engage in a short or long-term service experience, considerable amounts of research have been conducted to investigate the physical and psychological benefits of this pro-social behavior. A longitudinal study by Pilivian clearly demonstrates the beneficial nature of volunteering, as data suggested a causal relationship between volunteering and overall health and psychological wellbeing. Benefits were also stronger when the volunteer work was prolonged and consistent.¹

Benefits of volunteering are not limited to self-initiated volunteer work, as data from a study conducted by Schmidt, Schumow, and Kackar indicated no significant difference between benefits reaped from voluntary service and required service.² In this way, required service can be just as important as voluntary service. The nature of these benefits can be further broken down as either internal or external. Understanding the nature of different volunteer benefits can help us to further understand volunteer motivations, engagement, and satisfaction.⁴ With respect to youth volunteers, research suggests that they tend to be driven to volunteer initially by external benefits. For this age group, external benefits largely consist of resume building, college application building, and approval from adults.⁵ A study by Nicol also indicates that youth volunteers initially recognize egoistic external benefits before internal benefits.³ Other external benefits include higher academic outcomes and increased civic engagement into adulthood.³

External benefits can also extend beyond the individual youth volunteer, especially when the volunteer is serving another youth. Because youths are more likely to experience relatedness from another youth than an adult, youth volunteering for other youths are more likely to inspire their clients to engage in service themselves, inciting a chain

reaction of service.⁶ Furthermore, such meaningful interactions between the volunteer and the client improve the trustworthiness and credibility of the organization.⁶ However, internal benefits are also highly influential on youth volunteers, and they can help promote external benefits. For example, though research suggests youth volunteers are more aware of external benefits, one study indicated that volunteering enhanced intrinsic work values and decreased the importance of career.⁷ This finding suggests volunteers experience internal growth that strays from egoistic motivators. Such growth may also have the external benefit of exposing the youth to the altruistic side of employment and presenting the youth with a wider variety of vocational options in the future, overall indicating an overlapping relationship of internal and external benefits.⁷

Further, internal benefits are largely characterized by identity formation. For example, the majority of participants from a study by Grönlund shared that volunteering helped them construct their identity and embed it within many values and contexts.⁸ A minority of volunteers expressed no identity connection with volunteering, expressing the overall notion that volunteerism serves as an identity exploring mechanism for most volunteers.⁸ The study identified five identity subgroups that volunteering helped construct: Influencer Identity (values universalism, independence, and welfare), Helper Identity (values benevolence and utilizing personal experience to aid others), Faith-Based Identity (values religion and morality), Community Identity (values community and family), and Success Identity (values accomplishment, ambition, and progress).⁸ The volunteer work allowed the volunteers to experience a mixture of the five subgroups in order to fully develop a combination that encompassed their ideals and values. Youth also receive many relational benefits and often report the most satisfaction from benefits such as gratitude from others and closeness to both other volunteers and those being served.⁶ Other internal benefits such as an increased capacity for responsibility, increased pro-social skills, and higher self-esteem are also largely reported amongst youth volunteers.⁹ In accordance, the youth in a study by MacNeela reported the benefits of increased self-esteem and self-satisfaction over all other benefits.⁴ Overall, the benefits of volunteering are highly tangible across many domains of life for many different types of individuals, especially youth. Understanding these benefits can help us understand the importance of volunteer work as well as the motivations behind the volunteers—knowledge which is crucial to organizations as they attempt to attract and retain more volunteers.

Finally, an emerging tool in volunteer research is the use of Self-Determination Theory (SDT) as a framework to analyze satisfaction, sense of contribution, and engagement. This theory operates under the central notion that an individual's psychological wellbeing is dependent upon the extent to which the innate needs of autonomy, competence, and relatedness are met through an individual's lifestyle. In volunteer research, the three psychological needs under SDT are often analyzed as potential motivators for volunteers. With respect to level of engagement and work ethic, SDT states that the quality of motivation is more important than the quantity of motivation—in which intrinsic motivation is considered of higher quality in comparison to extrinsic motivation.¹⁰ In one study, high autonomy motivation, which is intrinsic in nature, was linked with higher work effort, supporting the value of intrinsic motivation.¹⁰ According to this study, intrinsic motivators such as autonomy may be even more important for youth volunteers.¹⁰ With the growing prevalence of this theory within volunteer research, it is ideal to explore its uses within the area of youth volunteerism as well.

The current study sought to expand upon the pre-existing research regarding youth volunteerism and Self-Determination Theory by using SDT to explore the degree to which youths express cognitive and affective engagement in their volunteer experiences, particularly, in a children's museum. Given the overwhelmingly positive results of previous volunteer studies, positive results were also expected for the present study, though it was unclear exactly where the volunteers would derive most of their engagement.

2. Methodology:

2.1 participants:

Fourteen youth volunteers with a median age of 14.7 years opted to participate. All were high school or middle school students from the surrounding area. The volunteers all served as either Museum Assistants or Play Assistants within a mid-size suburban children's museum. Museum Assistants typically greet guests, assist staff, and/or maintain exhibit spaces, whereas Play Assistants are trained to interact with visitors and support the children's learning experiences. The sample consisted of eleven Museum Assistants and three Play Assistants. The volunteers indicated a variety of reasons why they decided to volunteer, including peer influence, memories of visiting the museum as a child, interest in working with and understanding children, interest in giving back to the community, and parental encouragement.

Consistent with prior studies at the museum, youth volunteers indicated strong preferences for bubble and water exhibit elements as well as math-focused exhibits.

2.2 Self-Determination Theory:

The three tenets of Self-Determination Theory—autonomy, motivation, and competence—were utilized in the creation of the Experience Sampling Method survey, which is described below. The theory served as an aide in designing the survey questions in a way that elicited information on the volunteers’ cognitive and affective engagements in their experiences.

2.3 Experience Sampling Method survey:

Experience Sampling Method (ESM) was first developed by Csikszentmihalyi as a systematic phenomenology. The goal of ESM is to gain information about the participants’ experiences within the moment, as opposed to relying on fluid, retrospective memory. The original ESM model utilizes random interval cueing in which participants briefly document how they are feeling and/or thinking about the experience.¹¹ The present study sought the use of ESM because a previous study at the same children’s museum utilized a semi-structured interview method, which relied upon retrospective memory. ESM allowed the researchers to obtain volunteers’ reactions as close to the moment of experience as possible. While the original model utilizes random interval cueing in gathering data, this study utilized event-contingent cueing via an ESM survey in order to avoid distracting the youth volunteers. Under this model, the volunteers would complete the ESM survey immediately after their volunteer shift. The survey was modeled to reflect key aspects of Self-Determination Theory (competency, relatedness, and autonomy). Table 1 displays the eight Likert scale questions and two open-ended questions that composed the ESM survey.

Table 1. ESM survey questions

	Not at All					Very Much				
Were you able to use your skills while you were volunteering today?	1	2	3	4	5					
Were you able to meet the needs of the guests at the children’s museum today?	1	2	3	4	5					
Did you learn anything or get better at anything while you were volunteering?	1	2	3	4	5					
Did you choose what you did today?	1	2	3	4	5					
Were you interested in what you were doing today?	1	2	3	4	5					
Did you feel anxious when you were volunteering?	1	2	3	4	5					
Did you feel bored when you were volunteering?	1	2	3	4	5					
How would you describe how you feel after volunteering?										
Please describe one thing you did during your volunteer shift.										

2.4 experimental design

This study was conducted from mid-June through mid-August of 2014. The beginning of June was spent recruiting participants via phone calls and emails. Each youth volunteer was mailed an informational packet including an informed consent form. Volunteers who returned their informed consent forms were able to begin completing ESM surveys. Participants could complete a survey after each regularly scheduled two hour volunteer shift, and most volunteers worked at least one day a week. Because stability over time was evaluated, participants were required to complete at least four surveys in order to be included in data analysis. To encourage participants to complete at least four surveys, participants were entered into a raffle for a gift card once they reached four surveys. Scale questions were coded and open-ended questions were transcribed verbatim and later analyzed for consistent themes.

3. Data:

Table 2. Mean responses for ESM survey

ESM Survey Item	Mean Response
Were you able to use your skills while you were volunteering?	3.43
Were you able to meet the needs of the guests at the children’s museum today?	4.43
Did you learn anything or get better at anything while you were volunteering?	3.43
Did you choose what you did today?	4.77
Did you enjoy what you were doing today?	4.43
Were you interested in what you were doing today?	4.36
Did you feel anxious when you were volunteering?	1.5
Did you feel bored when you were volunteering?	2.21

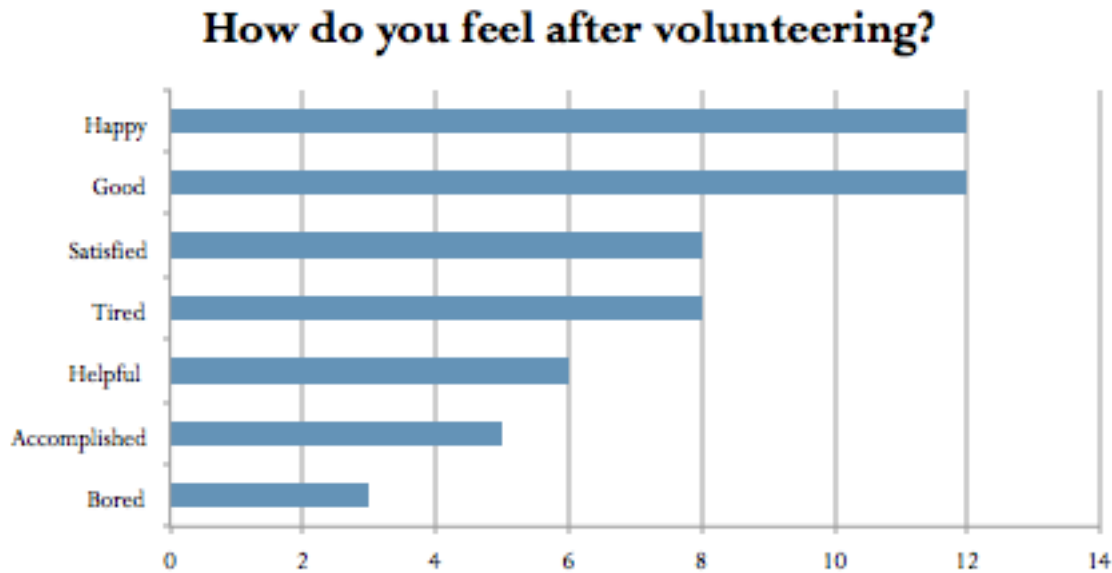


Figure 1. Frequency of key words in response to “How do you feel after volunteering?”

Table 3. Examples of experiences paired with feelings

Experience	Feeling
Played with bubbles and helped kids get the “big bubble” (10)	Accomplished
I cleaned up Monumental and I made some cool patterns in Math. I also told some parents about DCM’s summer camps and gave them the pamphlets. (17)	Happy that I made a difference in my community and to DCM.
I helped the kids do an estimation activity with blocks. (38)	Glad that I was able to help the museum and the kids who visited.
A young boy and I created a fountain. (46)	Want to come back next week
I helped a little boy find his lost sister and mom with the help of a floor manager. (47)	I feel very satisfied and helpful after volunteering.

Table 4. Comparison of participants 1 and 11

	Participant 1	Participant 11
Incoming motivation	My friend was volunteering at the museum and I thought it sounded fun.	I have a nephew 10 years younger than I and I wanted to better understand and communicate with him.
Experience	I picked up a lot of balls at the Airworks. / I took apart and used word pieces. / I put away building blocks.	I mainly cleaned up toys. My favorite part of the day was testing a young man on his adding and multiplying skills.
Feeling	Fulfilled. I helped people and that makes me happy.	I honestly do not feel like I am making a difference. I feel like a maid rather than a helper to educate.

4. Discussion:

4.1 connections to cognitive and affective engagement and SDT:

Data from the ESM surveys reflects average to high responses on autonomy, competence, and relatedness indicators. Competence is demonstrated through volunteers' expressed positive comments paired with opportunities to engage with children and their families; volunteers consistently expressed positive comments about their experiences. Autonomy was demonstrated through the volunteers' ability to choose where they wanted to work; however, despite this ability, volunteers reported average responses when asked about using or developing skills. This could be further explored. Finally, volunteers demonstrated relatedness through positive feelings after helping museum visitors; volunteers commented on making a difference in the community. Expressions of SDT translate to average to high responses on items measuring cognitive engagement, such as use of skills, learning new skill, and the ability to meet the needs of others. Though some participants reported feelings of boredom, responses favored positive affective engagement indicators such as enjoyment and interest.

4.2 consideration of contrasting experiences:

It is hypothesized that volunteers' satisfaction threshold for each aspect of SDT may vary depending various factors such as incoming motivation and age; this could explain for the several contrasting perceptions that were encountered despite similar experiences. This concept was briefly explored through Table 4 above. Despite both individuals engaging in mainly cleaning behaviors, Participant 1 reported feeling "fulfilled" and "happy," whereas Participant 11 reported feeling "like a maid." Participant 11 was a discrepant case, and because Participant 11 only completed one ESM survey, his/her data was not included in the data analysis. However, it is still important to consider this participant's negative experiences. It is possible that the incoming motivation is responsible for the contrasting perceptions this participant had compared to other participants, as Participant 11 specifically wanted to communicate with children rather than clean up exhibit spaces, whereas Participant 1 did not have very distinct motivations or goals for volunteering. However, it is difficult to confirm this due to the lack of data on this participant.

4.3 research limitations and further research:

The largest barrier to this study was obtaining a substantial sample size. Despite have a population of approximately 300 youth volunteers, it proved difficult to obtain the necessary informed consent from the youths in order for them to start participating. Utilizing youths as a participant pool is particularly difficult due to the need to obtain informed consent from the youths' parent/legal guardian. Further, it was difficult to obtain consistent participation from volunteers despite the offered incentive and follow-up telephone calls. Further research could benefit from utilizing multiple children museums in order to boost sample sizes. Other informal learning environments such as zoos, aquariums, and other museums that utilize youth volunteers could be examined to see if trends are comparable to those found within the museum that was studied.

4.4 conclusion:

The overall positive responses from participants regarding their experiences reflect the museum's bountiful volunteer population. Participants consistently expressed satisfaction through engaging with and aiding museum visitors, feeling connected to the community, and being able to choose what they wanted to do during their shift. Data supports cognitive and affective engagement of the volunteers, explaining for continued participation in the volunteer program. This study aligns with previous volunteer research that outlines the benefits and motivations for individuals to engage in volunteering behavior. The results and limitations of this study reflects the need for volunteer coordinators to reach out to their volunteers in order to assess their programs. Outreach is essential to determine ways to recruit new volunteers and maintain prolonged participation from current volunteers. Utilizing SDT in particular can help assess volunteers' satisfaction with their experiences.

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