

# Designing Social Interventions to Improve Newcomer Adjustment: Insights from the Indian Sex Worker Community

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*Nonprofit organizations use social interventions to improve the negative circumstances of marginalized people in subsistence markets. Unfortunately, such intervention efforts are frequently characterized by poor outcomes. Aiming to identify characteristics of effective social interventions, the authors examine the impact of contact intensity and cohort size, in conjunction with external and internal peer influence, on the newcomer adjustment (i.e., socialization) of marginalized people in subsistence markets to social interventions. The authors test the framework using data from members of the sex worker community in India who completed a vocational training program intended to improve their employability outside the sex trade. The findings indicate that the effects of social intervention characteristics, contact intensity, and cohort size on newcomer adjustment to the intervention are positively and negatively affected by the influence of external and internal peers; newcomer adjustment, in turn, influences employment outcomes. The authors conclude with a discussion of the importance of considering social intervention characteristics and social-related factors to help marginalized people in subsistence markets adjust to the interventions' proposed behavioral changes.*

**Keywords:** social marketing, social intervention, newcomer adjustment, subsistence markets, peer influence, socialization

**N**onprofit organizations use social interventions, defined as intentional intercessions or acts to bring about change, as a way to improve the negative circumstances of marginalized people (Opt and Gring 2008). Such programs are typically driven by a desire to prevent the occurrence of harmful events and encourage positive behavioral changes (Andreasen 1994; Hirschman 1991). Social interventions have successfully confronted behavioral challenges; these include programs that help people cease drug use (Kotler 2011), eat more healthfully (Dhar and Baylis 2011; Goldberg and Gunasti 2007), and resist smoking (Pechmann and Reibling 2000).

An important issue facing nonprofit organizations is the design of effective social interventions. As Sheth and Frazier (1982, p. 16) noted more than 30 years ago, the design of social interventions “requires making decisions about which strategies to use, in what combination, and for which target groups to achieve policy objectives related to bringing about a prespecified magnitude and/or direction of change in a given social or consumption behavior.” In this article, we

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examine the design of a social intervention aimed at improving the employability of marginalized people in India's sex worker community in occupations outside the sex trade.<sup>1</sup>

Although social interventions are intended to both promote positive behaviors and avoid negative ones, many such efforts have had poor outcomes. These interventions fail because the target group construes them as insulting and stigmatizing (Ross and Nisbett 1991) and because the proposed behavioral changes are perceived as being incongruent with the participants' self-identities (Thoits 1991). While we know that the success of such programs, though often uncertain, depends on their design and on social factors, we know little about how marginalized people socialize to the interventions. In this article, we extend social marketing theory by using the concept of newcomer adjustment, which describes the socialization of participants to interventions. We define newcomer adjustment as the social transition by which marginalized people learn behavioral patterns expected of them as participants of the social intervention (adapted from Bauer et al. 2007; Kidwell et al. 2011).

An important stream of research examines social interventions in the context of subsistence markets (e.g., Epstein and Yuthas 2012; Viswanathan, Gau, and Chaturvedi 2008; Viswanathan et al. 2009). Subsistence markets are charac-

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<sup>1</sup>In this study, we use the term “sex worker community” to refer to the adult children of sex workers and people who are rescued from sex trafficking.

terized by poverty, social inequity, scarcity of information, low education, and poor infrastructure. Given that approximately 22.2% of the world's population lives on less than US\$1.25 per day (World Bank 2012), the need for social interventions aimed at alleviating poverty in subsistence markets at the individual level is critical (Christensen, Parsons, and Fairbourne 2010). Half of the world's poor live in India and China (mainly India; Sumner 2012), making the need for interventions in these countries particularly acute. Few empirical studies have investigated the degree to which marginalized people in subsistence markets socialize to the many interventions aimed at them.

The characteristics of a social intervention, including how it is designed and administered, influence participation (Weerawardena and Mort 2012). Furthermore, participation depends on social pressures, including constraints and reinforcement from peers (Bertrand, Mullainathan, and Shafir 2006). Thus, we consider the effects of contact intensity, the number of hours that people engage in the social intervention, and cohort size (i.e., the size of the group engaging in the program) on the newcomer adjustment of marginalized people in subsistence markets to the intervention. We hypothesize that the effects of contact intensity and cohort size on newcomer adjustment are contingent on the influence of peer groups. We examine two types of peer influence: external peer influence from peers unrelated to the social intervention and internal peer influence from peers who participate in the intervention.

We test our hypotheses using data on a vocational intervention aimed at improving employment opportunities for the adult children of sex workers and for people rescued from sex trafficking in India. We administered a survey to 90 men and women from the sex worker community who completed the employment program in one of four centers in India. Using these data, we estimate a regression model of the effects of the intervention (contact intensity and cohort size) and peer (external and internal) characteristics on newcomer adjustment.

A pertinent question is whether newcomer adjustment to social interventions in subsistence markets helps participants subsequently achieve the intended life outcomes. To address this, we examine the effect of newcomer adjustment on whether the women and men in the sample got a job outside the sex trade after completing the vocational program. Using follow-up data on employment outcomes, we estimate a proportional hazard model and find that, as expected, the higher the person's newcomer adjustment to the program, the higher the likelihood that he or she will get a job outside the sex trade. This study's findings contribute to marketing theory and have implications for public policy.

## Theory and Hypotheses

### Newcomer Adjustment

We define newcomer adjustment as the social transition by which marginalized people learn behavioral patterns expected of them as participants in the social intervention. Previous work in the organizational behavior literature (e.g., Ashforth, Sluss, and Saks 2007; Bauer et al. 2007) has shown that the design of interactions between socialization agents

and newcomers to an organization influences adjustment and enables the newcomers to gain the skills and knowledge necessary to function more effectively. In the marketing context, Köhler et al. (2011) find that interaction style and type of information provided by online (socialization) agents significantly influence customers' newcomer adjustment, which in turn influences firm-level performance.

Newcomer adjustment consists of three underlying elements: role clarity, self-efficacy, and social acceptance (Bauer et al. 2007). Participants' adjustment to new roles—or role clarity—depends on how clearly they understand what is expected of them (Rizzo, House, and Lirtzman 1970). Self-efficacy refers to a person's belief that he or she can effectively meet the requirements of the new role (Parker 1998). Social acceptance is the idea that when people feel acknowledged, appreciated, and liked by their peers, their newcomer adjustment increases (Van Maanen 1978). Accordingly, we propose that newcomer adjustment is the degree to which participants in social interventions (1) learn what roles and expectations are involved as a participant, (2) gain confidence in mastering the required skills and abilities, and (3) feel accepted and appreciated by others.

Although it is largely based in organizational behavior literature, the concept of newcomer adjustment is also related to consumer socialization research on how people acquire the skills needed to function in the marketplace and become proficient consumers (e.g., Moschis and Moore 1979; Ward 1974); it is also related to consumer acculturation research on the processes of movement and adaptation to new consumer environments (e.g., Peñaloza 1994, 1995). For example, in a qualitative study of Mexican immigrant acculturation to the United States, Peñaloza (1995) shows that transcultural acculturation entails internalizing the logic of the new system, which is not always achieved due to resistance to change. In subsistence cultures, traditional cultural values and normative restrictions of family and social relationships persist, increasing the propensity to prefer established customs and behaviors over new ones (Hapke 2001). For example, in the Hindu tradition in India, people believe that they do not have direct control over their fate but can exercise some autonomy within the constraints they face (Chaturvedi, Chiu, and Viswanathan 2009). Sex workers in countries such as Thailand and India often believe that their fate is predestined, and as a result, they perceive that they do not have control over changing their profession (Montgomery 2001). Thus, marginalized people in subsistence markets may not adequately adjust to social interventions, even if they perceive the proposed changes as beneficial.

### Social Intervention Characteristics

Social interventions vary in the degree to which people are required to participate and the number of people who jointly engage in them. Increasing an intervention's demands can induce feelings of inefficacy and alienation, particularly if participants perceive the behavioral changes pushed by the intervention to be insurmountable or inconsistent with those of their community (Moore et al. 2002). Furthermore, participation often has an opportunity cost, which can be especially onerous for marginalized people in subsistence markets (Viswanathan, Rosa, and Ruth 2010).

In subsistence cultures, resistance to or limited participation in interventions is common (Luthans and Ibrayeva 2006; Wharton 1968). For example, members of the sex trade community have considerable financial and family responsibilities that can reduce their involvement in such programs. We consider how a vocational intervention's contact intensity, defined as the number of hours that people engage in the program, affects their newcomer adjustment.

How people adjust to social interventions is likely to depend on other participants (Andreasen 2002). For example, Peñaloza (1994, 1995) finds that social networks are foundational elements in immigrant consumers' acculturation, with clusters of immigrants providing resources for acculturation support. Furthermore, Swain (2007) describes how nonprofit organizations provide microfinance loans and financial educational services to impoverished women in subsistence markets. Such programs garner the social networks of self-help groups, enabling the women to pool resources and encouraging social connections to reduce the likelihood of defaults. Other research has shown that the effects of consumer-to-consumer interactions in shaping product meaning and combining resources to coproduce services are a unique aspect of subsistence marketplaces (Pralhad 2005). We argue that the size of the group coparticipating in the social intervention (i.e., its cohort size) will influence newcomer adjustment to the program.

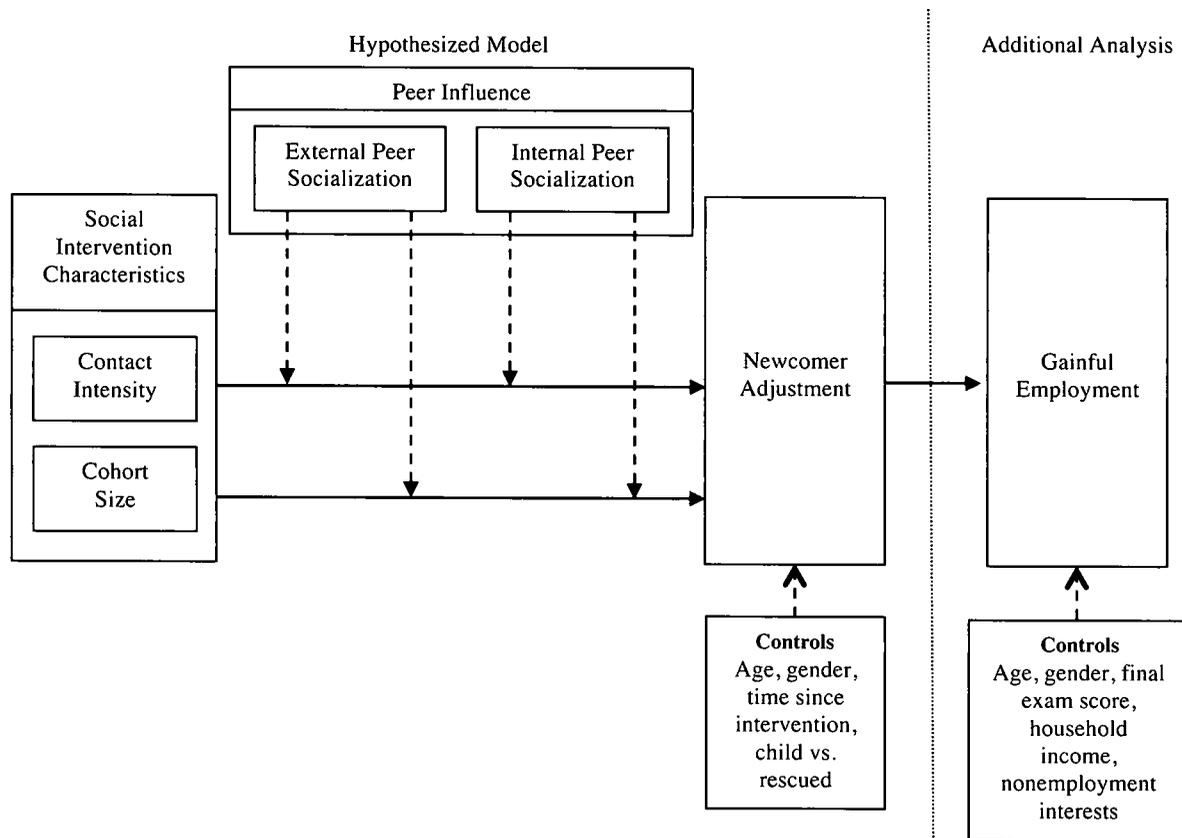
## Peer Influence

Socialization agents influence the outcomes of social interventions (Moore et al. 2002). In particular, peers influence others' beliefs (Hawkins and Coney 1974; Moschis and Churchill 1978) and provide role models for emulation (Moschis 1987). Peer influence is especially important for those with disruptive family situations (Moschis 1987), as is often the case with marginalized people living in poverty. The market participation of people living in subsistence markets largely depends on the influence of others in their social networks (Viswanathan, Rosa, and Ruth 2010). Thus, we expect that peers will influence the extent to which marginalized people in subsistence markets socialize to interventions. We distinguish peers external to the intervention and those internal to it and examine their moderating effects on the relationships between intervention characteristics (contact intensity and cohort size) and newcomer adjustment. This distinction is important because the influence of in-groups and out-groups on a person's decision making differs on the basis of his or her perceived social distance from group members (Zhao and Xie 2011). Figure 1 presents our conceptual framework.

## Contact Intensity

In general, a person's interactions with an entity (e.g., organization) build trust and loyalty (Doney and Cannon 1997),

Figure 1. Conceptual Model



resulting in positive outcomes. Increasing the duration and interaction frequency of a relationship decreases uncertainty and increases each party's confidence in the other (Anderson and Weitz 1989). These findings suggest that increasing the contact intensity of a social intervention will increase a person's newcomer adjustment to it.

Other studies, however, suggest that neither relationship duration nor interaction frequency drives strong relationships. In the case of social marketing efforts, targeting people for behavioral changes for an extended period can result in stigmatization (Guttman and Zimmerman 2000) and boomerang effects, increasing the prevalence of undesirable behaviors (Byrne, Linz, and Potter 2009). Increased exposure to a social intervention could increase a participant's stress and decrease his or her feelings of self-efficacy with respect to the intervention (Pechmann et al. 2011).

In subsistence markets, marginalized people must balance their educational and employment demands with their familial and financial responsibilities (Viswanathan, Rosa, and Ruth 2010). Increasing the effort required to participate in a social intervention (by increasing its contact intensity) can create competing demands and decrease participants' ability to cope with requirements of the program, thereby lowering their newcomer adjustment. In the case of the sex worker community in India, requiring people to engage in a social intervention for a greater number of hours forces them to forgo income that they might have accrued during that time, which could negatively affect their families. Thus, increasing the requirements of the intervention may negate, and even eclipse, any benefits associated with trust-building and loyalty, leading to  $H_1$ :

$H_1$ : Increasing the contact intensity of the social intervention has a negative effect on the newcomer adjustment of marginalized people in subsistence markets to the intervention.

## Cohort Size

Cohort size has long been discussed in educational settings, with a recent push to reduce class sizes to increase per-pupil resources. For example, in California, the state government offers extra funding—more than \$1,000 per student—to school districts that cap class sizes at 20 students (Tuna 2010). However, for social interventions that encourage substantial behavioral changes aimed at marginalized people, we propose that increasing the number of participants will increase newcomer adjustment.

Larger (vs. smaller) groups are inherently more diverse and include members who possess different skills and experiences, thereby increasing the chances that someone in the group will be able to handle tasks that arise. Furthermore, larger groups increase the number of possible person-to-person links, which may help people adapt quickly to new situations (Dunbar 1993). In addition, increasing the cohort size of an intervention creates positive group dynamics that can reduce the social stigma associated with the program (Pechmann et al. 2011). For example, some stigmatized identities, such as sex work, face societal prejudices that persistently devalue them (Ashforth and Kreiner 1999). For people doing such work, the support they gain from socializing with a large group of peers partially insulates them from identity threats and also provides a source of identity affirmation (Ashforth et al. 2007). For a social intervention,

increasing the cohort size may reduce the stigmatization of behaviors (e.g., sex work) made salient by the intervention (Pechmann et al. 2011) because the social support stems from a larger group of people with similar backgrounds who are experiencing the same intervention. Increasing cohort size may also increase participants' perceived role clarity because they can get a better sense of what is expected of them based on the actions of the many "similar" others in the intervention.

Social networks are critical in subsistence markets, and interventions targeted at groups leverage the inherent oral communication and social skills that these group members already possess, thereby socializing them to the intervention (Viswanathan et al. 2009). These strong social relationships create interdependencies among members, increasing the role of powerful group influences and word-of-mouth communications (Weidner, Rosa, and Viswanathan 2009). In summary, larger cohort sizes reduce stigmatization and increase social support, interdependencies, and role clarity. We expect that the positive effect of cohort size on marginalized people's newcomer adjustment is likely to eclipse the negative effect of a per-capita decrease in resource allotments. Thus:

$H_2$ : Increasing the cohort size of the social intervention has a positive effect on the newcomer adjustment of marginalized people in subsistence markets to the intervention.

## Moderating Effects of Peer Influence

### External Peer Influence

Evidence shows that external peers have both positive and negative influences on socialization behavior. For example, relying on external peers for information about consumption-related matters positively influences sexually responsible attitudes (Moore et al. 2002). However, when people engage in new behaviors, such as those required by social interventions, dissimilarities between themselves and their external peers increase, raising the risk of being ridiculed (Burns and Darling 2002). When the influence of external peers is strong, such salient dissimilarities may have a negative effect on newcomer adjustment. We are interested in how external peer influence moderates the negative effect of contact intensity ( $H_1$ ) and the positive effect of cohort size ( $H_2$ ) on newcomer adjustment.

If people share a particular characteristic, they feel pressure to remain similar on that characteristic (Cohen and Cohen 1983). When participants are heavily influenced by their external peers, increasing the contact intensity of the intervention will create dissimilarities between them, causing them to face ridicule from their peers (Burns and Darling 2002). Due to the pressure of seeking social acceptance from external peers and the risk of losing ties to them, program participants might disengage from an intervention. Thus, we propose that external peer influence will strengthen the negative effect of contact intensity on newcomer adjustment.

As we argued in  $H_2$ , social interventions that leverage the inherent social skills of people in subsistence markets are more likely to socialize them to the behavioral changes promoted by the programs (Viswanathan et al. 2009). Even large cities in developing countries have subcommunities

with flourishing, tight-knit social networks (Viswanathan et al. 2012). For example, members of the sex worker community in India typically live in highly concentrated sections of urban slums, meaning that a resident's activities are known to others (Boo 2012). Given that community members in subsistence markets strongly influence one another's behavior (Viswanathan, Rosa, and Ruth 2010; Viswanathan et al. 2012), as more members of the community participate in the intervention, it is likely to gain legitimacy from external peers (Perry-Smith and Blum 2000). Such legitimacy may (positively) change external peers' attitudes toward the social intervention, helping participants feel more comfortable with the program (self-efficacy) and more open to its intended behavioral changes (social acceptance). Following these arguments, we offer H<sub>3</sub> and H<sub>4</sub>:

H<sub>3</sub>: External peer influence strengthens the negative effect of contact intensity on the newcomer adjustment of marginalized people in subsistence markets to the intervention.

H<sub>4</sub>: External peer influence strengthens the positive effect of cohort size on the newcomer adjustment of marginalized people in subsistence markets to the intervention.

### **Internal Peer Influence**

Internal peers may influence a person's adjustment to a social intervention through passive means, such as by observing peers' behaviors in the intervention (Graham, Marks, and Hansen 1991). Participants who are well-adjusted to the program are likely to appear as such, which may be "contagious," influencing other participants' perceptions and evaluations of the intervention (Hennig-Thurau et al. 2006). Furthermore, the emotional support of internal peers may empower participants to challenge the stigmatizing labels that their families and communities assign to them (Ungar 2000). These studies lead us to expect that the positive effects of social contagion and the reduction in social stigma associated with internal peer influence are likely to have a positive effect on newcomer adjustment. We are interested in how internal peer influence moderates the negative effect of contact intensity (H<sub>1</sub>) and the positive effect of cohort size (H<sub>2</sub>) on newcomer adjustment.

As we previously argued in H<sub>1</sub>, increasing the contact intensity of a social intervention in a subsistence market should decrease newcomer adjustment because it increases participants' competing demands and the salience of the behavioral problems that the intervention intends to change (Pechmann et al. 2011). However, as internal peer influence grows, increasing the contact intensity of the social intervention will be less stigmatizing because a participant and his or her internal peers are engaged in the same program, thereby reducing the perceived burden (Ducharme and Martin 2000). Thus, we propose that the positive reinforcement that arises from internal peer influence will reduce the negative effect of contact intensity on newcomer adjustment.

As we noted in H<sub>2</sub>, *ceteris paribus*, increasing the cohort size of an intervention enables participants to harness the social dynamics and increased legitimacy of a larger group, increasing their socialization to the intervention. In subsistence markets, strong social relationships create interdependencies among people, thus increasing the role of powerful group influences (Weidner, Rosa, and Viswanathan 2009).

We also argue that increasing the size of the cohort increases the likelihood that internal peer groups will form, enabling participants to harness the social dynamics within these groups. Large cohort sizes can lead to perceived social acceptance, causing an increase in internal peer influence. Therefore, we hypothesize the following:

H<sub>5</sub>: Internal peer influence weakens the negative effect of contact intensity on the newcomer adjustment of marginalized people in subsistence markets to the intervention.

H<sub>6</sub>: Internal peer influence strengthens the positive effect of cohort size on the newcomer adjustment of marginalized people in subsistence markets to the intervention.

## **Method**

### **Data**

We test our hypotheses using data collected from the adult children of sex workers and from people rescued from sex trafficking in India. Globally, there are more than 40 million sex workers, 10 million of whom are children (Kristof 2007). In India alone, more than 40% of sex workers enter the sex trade before the age of 18, and an estimated 12,000–50,000 women and children are trafficked each year for sexual exploitation (Biswakarma 2009). The adult children of Indian sex workers and those trafficked for sex work are poor and illiterate, have low social status, and experience physical and sexual violence (Sahni and Shankar 2011).

The people we sampled for this research completed a vocational training program in one of the following cities: Mumbai, Chennai, Hyderabad, or Kolkata. The goal of the intervention was to educate members of the sex worker community and help place them in gainful jobs outside the sex trade. To obtain the data, we worked closely with a non-profit organization that runs the training program in these cities. The curriculum includes training in the Microsoft Office suite, computer typing, and data entry as well as lessons about life skills and conversational English. The four centers follow the same curriculum, although they vary in terms of number of contact hours (range: 144–480 hours) and cohort size (range: 25–69 people) due to physical capacity and time availability constraints.

We worked with the program coordinator at each center to develop a paper questionnaire to collect self-reported newcomer adjustment and socialization agent scores as well as other control variables and background information. Given participants' unique cultural, societal, and economic backgrounds, we relied heavily on the expertise of the program coordinators to help us word the questions. At three of the centers, the participants spoke Hindi, whereas at the fourth center, they spoke Tamil. All items used in the questionnaire were developed in English and then translated into Hindi and Tamil. In May 2011, the program coordinators sent out a request to the 186 people who had completed the vocational training program during the period from May 2010 to February 2011 across the four centers. Ninety people agreed to complete the questionnaire, for a response rate of 48%. Of the 90 respondents, 24 were from Mumbai, 22 were from Chennai, 20 were from Hyderabad, and 24 were from Kolkata. The respondents' ages ranged from 17 to 21

years. The average monthly income for their households was US\$90. Their primary reasons for entering the vocational program included desires to acquire technical skills, support their families, gain confidence, and obtain employment outside the sex work industry. Table 1 contains background information on the respondents.

We hired a research assistant (RA) to administer the questionnaire in each city. She had a background in developmental economics from the United States and was interning at a nonprofit organization in India during the sample time frame. She was fluent in English and Tamil and proficient in Hindi. The RA received the contact information of the people who agreed to participate in the questionnaire and contacted them directly. She traveled to the four cities in July 2011 to administer the questionnaire to the respondents in each city during a single session in a location separate from the training centers.

## Measures

### Dependent Variable

The dependent variable is newcomer adjustment. In line with previous research (Bauer et al. 2007; Köhler et al. 2011), we operationalize newcomer adjustment as a second-order construct comprising the first-order constructs of social acceptance (Fey 1955), role clarity (Rizzo, House, and Lirtzman 1970), and self-efficacy (Kidwell et al. 2011). To measure these constructs, we created a pool of multiple-item Likert scales for the questionnaire. The items were measured on a seven-point scale (1 = "totally disagree," and 7 = "totally agree").

### Independent Variables

The independent variables are contact intensity, cohort size, external peer influence, and internal peer influence. To measure contact intensity, we collected data from the program coordinators at the four training centers on the total number of hours of each program and the number of people enrolled. To measure external and internal peer influence, we included Likert scales adapted from previous research (Moschis 1979) in the questionnaire. We report the measures, items, and factor loadings of the constructs in Table 2.

### Control Variables

Consistent with prior research on consumer socialization (Moore et al. 2002; Moschis and Moore 1982) and subsistence marketplaces (Viswanathan et al. 2009), we consider the effects of age and gender. We collected age (in years) and gender (0 = male, 1 = female) data using the questionnaire. Because some respondents completed the survey several months after completing the intervention, we control for retrospective bias by including the variable time since intervention, measured as the number of days between the intervention completion and survey completion. We also include a dummy variable, child versus rescued, to control for differences between the adult children of sex workers and people rescued from sex trafficking in the sample (adult child of sex worker = 0, rescued from trafficking = 1).

We evaluate the reliability of the multi-item scales using composite scale reliability (Fornell and Larcker 1981). For all measures, the reliability is well above the cutoff value of .70. In addition, we evaluate convergent validity by inspecting the standardized loadings of the measures on their respective constructs (Chin 1998) and find that all measures have standardized loadings exceeding .70 (Hulland 1999). A confirmatory factor analysis for the three newcomer adjustment factors of social acceptance, role clarity, and self-efficacy shows a good fit (normed fit index = .95, confirmatory fit index = .91, and root mean square error of approximation = .06) and is superior to a competing one-factor newcomer adjustment model (normed fit index = .76, confirmatory fit index = .61, and root mean square error of approximation = .11). Prior research (e.g., Fletcher, Simpson, and Thomas 2000; Köhler et al. 2011) demonstrates that the best-fitting model for social constructs is one in which the items load on first-order factors, which in turn load on a second-order factor that reflects overall social effects.

To test for normality of the variables, we calculated skewness and kurtosis statistics for each of the independent and dependent variables. Most of the skewness and kurtosis ratios are within the range of -1 to 1, indicating acceptable limits of normality. However, we find high skewness and kurtosis ratios for newcomer adjustment at -1.34 and 3.81,

**Table 1.** Respondent Background Information

Center	Number of Respondents	Age <sup>a</sup> (Years)	Monthly Household Income <sup>a</sup>	Years of Education Completed <sup>a</sup>	Gender <sup>a</sup> (% Female)	Adult Child of Sex Worker <sup>a</sup> (vs. Rescued from Trafficking)
Mumbai	24	18.68	\$97	10.33	67%	78%
Hyderabad	20	20.35	\$87	9.88	88%	33%
Chennai	22	19.14	\$86	11.54	59%	89%
Kolkata	24	19.31	\$91	10.75	76%	68%
Total average across centers	90	19	\$90	10.6	73%	67%

<sup>a</sup>The values represent an average at each center.

Table 2. Measures and Items

Construct/Items	Standardized Loadings	Composite Reliability
<b>Dependent Variables</b>		
<i>Social Acceptance</i> <sup>a</sup>		
I felt accepted as a student of the program.	.90	.92
I understood the values that are important to the training program.	.89	
I got along with the teachers at the training program.	.88	
I got along with the other students at the training program.	.89	
<i>Role Clarity</i> <sup>b</sup>		
I knew what my responsibilities were as a student of the training program.	.83	.89
I knew what I needed to do as a student of the training program.	.89	
It is clear to me what I was obliged to do as a student of the training program.	.92	
I knew what my role was as a student of the training program.	.86	
<i>Self-Efficacy</i> <sup>c</sup>		
I was confident of my ability to perform well during the training program.	.83	.90
I was confident about my abilities when entering the training program.	.89	
I was confident about getting a job after the training program.	.92	
I feel I have the skills to successfully perform at a job after the training program.	.86	
<i>Newcomer Adjustment</i> <sup>d</sup>		
Social acceptance	.83	.90
Role clarity	.87	
Self-efficacy	.91	
<b>Independent Variables</b>		
<i>Contact Intensity</i>		
Number of contact hours per week multiplied by the number of weeks in the intervention	N.A.	N.A.
<i>Cohort Size</i>		
Number of people enrolled in the intervention	N.A.	N.A.
<i>External Peer Influence</i> <sup>e</sup>		
My friends knew that I went for training.	.94	.93
I regularly asked my friends about their opinions about my training.	.89	
I regularly told my friends about my training.	.94	
<i>Internal Peer Influence</i> <sup>e</sup>		
I became friends with other students in the class.	.88	.92
I regularly interacted with other students in the class.	.93	
I felt comfortable with other students in the class.	.91	

<sup>a</sup>Adapted from Fey (1955).

<sup>b</sup>Adapted from Rizzo, House, and Lirtzman (1970).

<sup>c</sup>Adapted from Kidwell et al. (2011).

<sup>d</sup>Second-order construct.

<sup>e</sup>Adapted from Moschis (1979).

Notes: N.A. = not applicable.

respectively. Internal and external peer socialization also have high ratios. These findings indicate a possible violation of the assumption of normality of data. To address this, we transform the newcomer adjustment and peer socialization variables using (1) logarithm, (2) square root, and (3) inverse transformations. The results using the transformed variables are statistically similar to the model results using the original scales of the variables.

## Model

To account for measurement error caused by multi-item scales, previous researchers have employed structural equation (path) models (e.g., Fornell and Larcker 1981). However, given our relatively small sample size, structural mod-

els will not produce stable parameter estimates (Boomsma and Hoogland 2001). Thus, to adjust for specific error and potential unreliability, we create factor scores of the multi-item constructs and use the factor loadings of newcomer adjustment, external peer influence, and internal peer influence as the dependent and independent variables, respectively.<sup>2</sup> Thus, for individual *i* who participated in the intervention at training center *j*, we estimate the following regression model:

<sup>2</sup>We considered including dummy variables to control for differences across the four educational centers, but we found that they were highly correlated (.84) with the intervention characteristics and therefore do not include them.

$$\begin{aligned} \text{NewcomerAdjustment}_i = & \beta_0 + \beta_1 \text{ContactIntensity}_i + \beta_2 \text{CohortSize}_i \\ & + \beta_3 \text{ExternalPeerInfluence}_i \\ & + \beta_4 \text{InternalPeerInfluence}_i \\ & + \beta_5 (\text{ExternalPeerInfluence}_i \\ & \times \text{ContactIntensity}_i) \\ & + \beta_6 (\text{ExternalPeerInfluence}_i \times \text{CohortSize}_i) \\ & + \beta_7 (\text{InternalPeerInfluence}_i \\ & \times \text{ContactIntensity}_i) \\ & + \beta_8 (\text{InternalPeerInfluence}_i \times \text{CohortSize}_i) \\ & + \beta_9 \text{Age}_i + \beta_{10} \text{Gender}_i \\ & + \beta_{11} \text{TimeSinceIntervention}_i \\ & + \beta_{12} \text{ChildvsRescued}_i + \varepsilon_{ij}. \end{aligned}$$

## Results

We examined the correlations between the explanatory variables and found them to be within acceptable limits (the highest correlation is .509 between cohort size and external peer influence), suggesting that multicollinearity is not a threat to the validity of the study's findings. Table 3 contains the descriptive statistics and correlation matrix of the measures.

We compare the hypothesized model with a model containing only the main effects of the explanatory variables, including the control variables. The hypothesized model with interaction effects has an adjusted R-squared value of .507 compared with .443 for the model with only the main effects and control variables. The difference in R-squared values is significant ( $F = 6.98, p < .01$ ). Thus, the hypothesized model with interactions explains newcomer adjustment to social interventions better than a model with only main effects and control variables. Table 4 shows the estimation results of the newcomer adjustment model. We report standardized parameter estimates to allow for comparisons across the explanatory variables. The data fit the model well, as indicated by the F-statistic ( $F = 9.32, p < .01$ ).

With respect to the hypothesized effects, we find support for  $H_1$  ( $b = -.241, p < .05$ ), which indicates that increasing the contact intensity of the social intervention has a negative effect on newcomer adjustment to the program. We do not find support for  $H_2$  ( $b = .148$ , not significant [n.s.]), suggesting that cohort size does not have a direct effect on newcomer adjustment. We find support for  $H_3$  ( $b = -.286, p < .05$ ), indicating that external peer influence strengthens the negative effect of contact intensity on newcomer adjustment. We find marginal support for  $H_4$  ( $b = .215, p < .10$ ), suggesting that external peer influence interacts with cohort size to positively influence newcomer adjustment. We find support for  $H_5$  ( $b = .355, p < .01$ ), indicating that internal peer influence weakens the negative effect of contact intensity on newcomer adjustment. We do not find support for  $H_6$  ( $b = -.105$ , n.s.), suggesting that internal peer influence does not moderate the effect of cohort size on newcomer adjustment.

We also find some nonhypothesized effects. External peer influence increases newcomer adjustment ( $b = .344, p < .05$ ), whereas internal peer influence ( $b = .138$ , n.s.) has no effect. With respect to the control variables, male respondents have marginally higher newcomer adjustment than female respondents ( $b = -.273, p < .10$ ). Age ( $b = .001$ , n.s.), time since intervention ( $b = -.002$ , n.s.), and child versus rescued ( $b = -.037$ , n.s.) have no effect on newcomer adjustment.

## Effect Size

To determine the effect sizes of the explanatory variables on newcomer adjustment, we examine their partial eta-squared values, which are an indication of the variance explained in the dependent variable by the variable in question (Sharma, Sivakumaran, and Marshall 2010). We used STATA 11.1 statistical software to compute these values. Higher eta-squared values indicate a greater percentage of explained variance (for effect sizes, see Table 3). From these values, we find that the main effects of contact intensity (5.43%) and external peer influence (7.30%) have the largest direct effects on newcomer adjustment. Contact intensity has the largest joint effects with external peer influence (8.58%) and internal peer influence (12.79%) on newcomer adjustment. These results suggest that contact intensity, independently and in conjunction with peer influences, drives newcomer adjustment to the social intervention we studied in this article.

## Nonlinear Effects

The results show that contact intensity decreases and cohort size increases newcomer adjustment. However, these effects may not be linear. To test for nonlinear effects, we include in the hypothesized model the squared terms of contact intensity and cohort size in addition to their linear terms. The results of the nonlinear terms are not significant (contact intensity:  $b = .568$ , n.s.; cohort size:  $b = .012$ , n.s.). This raises the issue of whether there is a maximum to the range of cohort size. We are not able to test the uppermost boundary of cohort size, but we can state that within the range we considered (25 to 69 people), *ceteris paribus*, the cohort with 69 people had greater newcomer adjustment.

## Individual Variation

In the empirical approach that we use to test the hypotheses, contact intensity and cohort size vary across training centers and not across individual participants. To address whether variation in these variables exists across participants, we gathered data on the attendance rate and the number of dropouts at each center. The attendance rates at the Mumbai, Chennai, Hyderabad, and Kolkata centers were 97%, 98%, 97%, and 96%, respectively. Furthermore, there were only six dropouts across the four centers, which we excluded from our sample. We attribute the high rates of attendance and low dropout rates to the mothers of the students ensuring that their children attended the classes. In addition, the students could not use the training centers' employment services if their attendance was not close to 100%. The lack of variation across the four centers supports our use of contact intensity and cohort size at the center level.

## Newcomer Adjustment and Employment

Our findings raise questions about whether and how marginalized people's newcomer adjustment to a social intervention in subsistence markets affects their subsequent life outcomes. The goal of the vocational intervention under study was to place members of India's sex worker community in jobs outside the sex trade, specifically, in entry-level

Table 3. Descriptive Statistics and Correlation Matrix

Variables	M (SD)	1	2	3	4	5	6	7	8	9
1. Newcomer adjustment	6.545 (.628)	1.000								
2. Contact intensity	310.214 (107.757)	-.482***	1.000							
3. Cohort size	59.576 (12.050)	.436***	-.031	1.000						
4. External peer influence	6.175 (1.222)	.521***	-.258**	.509***	1.000					
5. Internal peer influence	6.517 (.757)	.533***	-.382***	.330***	.507***	1.000				
6. Age	19.331 (6.598)	.108	-.292***	-.165	.055	.032	1.000			
7. Gender	.728	-.017	-.099	-.099	.110	.153	.078	1.000		
8. Time since intervention (days)	175.771 (94.032)	.124	-.496***	.084	.351**	.289**	.168	.035	1.000	
9. Child versus rescued	.311	-.014	-.002	-.242**	-.228**	-.084	-.181*	.064	-.154	1.000

\* $p < .10$ .\*\* $p < .05$ .\*\*\* $p < .01$ .

**Table 4. Regression Results of Newcomer Adjustment**

Effects and Variables	Hypothesis	Standardized Estimate (t-Value)	Partial $\eta^2$ (Effect Size)	Hypothesis Supported
<b>Main Effects</b>				
Contact intensity	H <sub>1</sub>	-.241 (-2.02)**	5.43%	Yes
Cohort size	H <sub>2</sub>	.148 (1.45)	2.84%	No
External peer influence		.344 (2.37)**	7.30%	
Internal peer influence		.138 (1.14)	1.77%	
<b>Moderation Effects</b>				
External peer influence × contact intensity	H <sub>3</sub>	-.286 (-2.58)**	8.58%	Yes
External peer influence × cohort size	H <sub>4</sub>	.215 (1.73)*	3.98%	Marginal support
Internal peer influence × contact intensity	H <sub>5</sub>	.355 (3.23)***	12.79%	Yes
Internal peer influence × cohort size	H <sub>6</sub>	-.105 (-1.01)	1.41%	No
<b>Control Variables</b>				
Age		.001 (.01)	.01%	
Gender		-.273 (-1.71)*	3.21%	
Time since intervention		-.002 (-.76)	.613%	
Child versus rescued		-.037 (-1.13)	1.38%	
Intercept		.151 (.283)		
Adjusted R-squared		.507		

\* $p < .10$ .\*\* $p < .05$ .\*\*\* $p < .01$ .

information technology jobs. The hiring firms—which included a national coffee chain, business process outsourcing firms, and software firms—hired the participants as part of their corporate social responsibility initiatives. They interviewed the participants to assess fit for the positions. However, not all of those who completed the program were hired. We asked the respondents whether they got an intervention-related job after completing the program and, if so, how long it took to procure the job. Using these data, we estimate a proportional hazard model of employment as a function of newcomer adjustment and additional control variables.

## Measures: Employment Model

### Dependent Variable

The dependent variable is the hazard of obtaining employment. We measure the employment outcome using a binary variable that equals 1 if the participant got a job and 0 if otherwise. We also collected information on the date of employment. We confirmed job status with the program coordinators at each center.

### Independent Variables

We include newcomer adjustment as the independent variable of interest. We also include age, gender, final exam score, household income, and extracurricular interests as control variables. After completing the training, students took a final exam (scores ranged from 44% to 83%, mean: 61%), which measured their performance in the intervention. This score was provided to potential employers and is likely to have affected employment outcomes. Household income, which is likely to affect the desire to earn employment income, is mea-

sured by the monthly rupees (converted from Indian rupees to U.S. dollars) earned by the household. Finally, to account for whether the participants planned to pursue interests other than getting an intervention-related job, we measured extracurricular interests using a binary scale (0 = no other interests, 1 = interests outside of intervention-related employment).

## Employment Model

We estimate a proportional hazard model to determine the participants' time to employment. We find that 67% of the participants did not have a job at the time of the data collection, although some were still searching for one, so the data are right-censored. Of the 30 respondents who obtained an intervention-related job, 7 were from Mumbai, 11 were from Chennai, 9 were from Hyderabad, and 3 were from Kolkata. The centers with the highest newcomer adjustment values were Chennai and Hyderabad. The hazard model provides the conditional probability that an individual  $i$  will experience an event in a time period  $t$  given that it has not already occurred, as a function of a baseline hazard plus some explanatory variables (Singer and Willett 2003). Thus, hazard rate  $h_i(t | x_i)$  represents the hazard of individual  $i$ , whose individual characteristics are captured by vector  $x_i$ , of obtaining employment at time  $t$ :

$$h_i(t | x_i) = f(\text{NewcomerAdjustment}_i + \text{Age}_i + \text{Gender}_i + \text{FinalExamScore}_i + \text{HouseholdIncome}_i + \text{ExtracurricularInterests}_i)$$

## Results: Employment Model

The correlations between the variables are within acceptable limits (the highest correlation is .291 between newcomer adjustment and household income). Table 5 presents

**Table 5. Hazard Model Results of Employment**

Variable	Hazard Ratio (SE)
Newcomer adjustment	1.635 (.388)*
Age	-.850 (.066)*
Gender	-.241 (.107)**
Final exam score	-.916 (.125)
Household income	1.000 (.000)
Extracurricular interests	-.989 (.059)

\* $p < .05$ .  
\*\* $p < .01$ .

the estimation results of the employment model. The results indicate that increasing newcomer adjustment to the social intervention increases the hazard of employment by 64% (hazard = 1.635,  $p < .05$ ). As age increases, the hazard of employment decreases (hazard = -.850,  $p < .05$ ). Men have a higher hazard of employment than women (hazard = -.241,  $p < .01$ ). Final exam score (hazard = -.916, n.s.), household income, (hazard = 1.000, n.s.), and extracurricular interests (hazard: -.989, n.s.) do not have an effect on the hazard of employment. Some of the nonsignificant effects are surprising and warrant further analysis.

We regress newcomer adjustment on age, gender, final exam score, household income, and extracurricular interests. Household income has a positive effect on newcomer adjustment ( $b = .697$ ,  $p < .01$ ), whereas all of the other variables are not significant. To determine whether newcomer adjustment mediates the effect of household income on the hazard of employment, we estimate the hazard model with and without newcomer adjustment. When estimated without newcomer adjustment, household income is significant (hazard: 1.99,  $p < .01$ ) but becomes nonsignificant when we run it with newcomer adjustment (hazard: 1.000, n.s.). Thus, newcomer adjustment seems to mediate the effect of household income on the hazard of employment. We suspect that as a person's household income increases, he or she can afford to participate in and adjust to an intervention that requires him or her to forgo income from the sex trade. The nonsignificant effect of the final exam score indicates that the hiring firms in the sample seemed to be more interested in helping such people turn their lives around and less concerned with their exam scores.

## Discussion

The marketing and public policy literature offers few insights into whether and how socialization processes influence the effectiveness of social interventions. Given the proliferation of such programs in subsistence marketplaces, more empirical research is needed to determine what affects people's newcomer adjustment to these interventions. Our study addresses these research gaps by investigating how program characteristics and peer influence affect the newcomer adjustment of marginalized people in subsistence markets to one such intervention and, subsequently, participants' employment outcomes. We focus on members of the sex worker community in India who participated in a voca-

tional intervention intended to improve their employability outside the sex trade.

## Theoretical Implications

This study makes three key contributions to the marketing and public policy literature. First, whereas prior research has examined the effects of peers on people's risky attitudes and behaviors (e.g., Moore et al. 2002), we examine the effect of peer influence on participants' adjustment to the social intervention itself. Furthermore, we disentangle the effects of external and internal peer influence and show that peer influence can, under certain circumstances, harm marginalized people. Second, prior research (e.g., Moore et al. 2002; Pechmann et al. 2011) has not examined long-term outcomes of social interventions, including gainful employment. Using a multimethod approach, we find that, following a social intervention, gainful employment is contingent on the participants' newcomer adjustment to the intervention. This creates implications for social marketing efforts that aim not only to promote positive behaviors but also to secure positive long-term outcomes for these participants. Finally, we contribute to the literature on marginalized people in subsistence markets (e.g., Prahalad 2005; Viswanathan and Rosa 2007; Viswanathan et al. 2012) by generating insights into how newcomer adjustment and peer influence can help people balance the opportunity costs of participation with the positive behavioral changes advocated by the programs.

## Public Policy Implications

A growing number of nonprofit and nongovernmental organizations are implementing social interventions in subsistence markets. However, the efficacy of such interventions is seldom assured. For example, UNICEF's health intervention in Mali and Ghana aiming to change nonsanitary behaviors and decrease the threat of malaria failed. In response, a former World Health Organization official who worked in Africa noted, "What's needed is more attention to what works in difficult settings" (Associated Press 2010).

Overall, we find that, more than the number of participants in the intervention, it is the number of contact hours, in conjunction with peer influences, that drives newcomer adjustment. The demands created by an intervention with longer and more frequent contact seem to decrease newcomer adjustment. Furthermore, the social dynamics of peer groups and the resulting increase in newcomer adjustment seem to arise more from the power of influential peers and less from the number of other participants in the program. From these findings, we offer specific recommendations for designing social interventions.

## The Design of Social Interventions

First, our study suggests that it is important to consider the number of hours required of intervention participants in subsistence markets. In these markets, marginalized people have to balance educational and employment demands with their family responsibilities (Viswanathan, Rosa, and Ruth 2010). Increasing the effort required to participate in the intervention is likely to create competing demands and decrease participants' ability to cope with the program's

requirements, lowering their newcomer adjustment and creating negative consequences for gainful employment. Nonprofit and nongovernmental organizations must carefully balance the decreased contact intensity of the intervention while ensuring that the necessary content is still delivered. This is especially important when external peer influence is high. In such cases, the negative effect of contact intensity becomes stronger. For more time-intensive social interventions targeted at people with a strong reliance on external peers, we recommend that nonprofit marketers cultivate internal peer influence by encouraging group exercises and peer interaction within the program.

Second, social networks are critical and abundant in subsistence markets (Prahalad 2005; Viswanathan et al. 2012), and social interventions targeted at particular groups can leverage the inherent oral communication and social skills that these groups already possess, thus socializing them to the intervention (Viswanathan et al. 2009). We recommend that nonprofits that deliver interventions to large numbers of marginalized people in subsistence markets invest in community awareness and outreach. Specifically, these organizations could reach out to external peers in the community to educate them about what the program participants are doing. In the intervention we studied, external peers had a stronger positive effect on newcomer adjustment than did internal peers. This counterintuitive finding highlights the important role that community members in subsistence cultures play in influencing people's socialization to new roles. We also find, however, that as contact intensity increases, external peer influence has a negative effect on newcomer adjustment and internal peer influence has a positive effect. This suggests a delicate balance between peer influence and the characteristics of social interventions. In addition, we find that men have marginally higher newcomer adjustment than do women. Because women have a higher probability of being trafficked and forced into the sex trade, it is paramount that their newcomer adjustment to social interventions improves. More research is needed to determine the drivers of gender-specific effects; identifying these factors could help designers of social interventions ensure that women experience positive newcomer adjustment.

### ***Newcomer Adjustment and Employment***

The findings of the hazard model of employment are heartening. Increasing the newcomer adjustment to the social intervention increased the likelihood of obtaining gainful employment after the program. This result has important implications for effective management of social intervention programs. For educational interventions, from a resource allocation perspective, it would be more useful to focus on newcomer adjustment, a behavioral outcome in the intervention, than on superior academic performance.

### ***Broad Public Policy Implications***

In line with Viswanathan et al.'s (2009) finding that consumer policy in subsistence markets should emphasize consumer empowerment, we advocate the use of social interventions that promote positive behaviors rather than prevent negative behaviors in such markets. A central problem with protection-oriented policies that attempt to shield people

from negative behaviors is that they tend to be based on "a deficit and problem-oriented" approach (Zimmerman and Arunkumar 1994, p. 2). The disadvantages and problems associated with the sex trade are obvious. However, simply rescuing children from sex trafficking or imprisoning the pimps is not enough. It is necessary to empower the rescued people through education, training, and job placement. For example, there are several accounts of girls rescued from trafficking in Thailand, Cambodia, and India who returned to their brothels because they were addicted to drugs and had no marketable skills outside the sex trade (Kristof and WuDunn 2009). Such interventions are helpful only if a viable alternative is provided.

Thus, although individual vulnerability is important (Baker, Gentry, and Rittenburg 2005) and policy should attempt to remove obstacles and reduce vulnerability, it should also promote opportunities and facilitate interventions that leverage the strengths of impoverished people (Moser 1998; Viswanathan et al. 2009). Policy analysts should work closely with nonprofit organizations to enforce protective measures to safeguard marginalized people against further exploitation. Moreover, policy analysts should work with public- and private-sector firms to provide long-term empowerment and gainful employment opportunities.

### **Limitations and Further Research**

Our study, which focuses on a difficult-to-study community, has inherent challenges and limitations. Our sample size is relatively small. Although small samples tend to reduce statistical power and inflate Type II errors, we still find strong support for our hypotheses. Further research, however, would benefit by expanding our framework across multiple social interventions to gather data from a larger sample population.

Although people living in extreme poverty in the cities of Mumbai, Chennai, Hyderabad, and Kolkata, including members of the sex worker communities, show a high degree of homogeneity, there are some differences across these cities that future studies should capture. Furthermore, there might be differences across training centers that should be documented to predict newcomer adjustment. However, in our data, center location (and city location, because there was only one center per city) was highly correlated with the two intervention characteristics of contact intensity and cohort size, precluding us from independently controlling for center and city effects. Ideally, social intervention variables would be manipulated across training centers, enabling us to identify the unique effects of contact intensity and cohort size while controlling for training center effects. Moreover, further research could append city-level data to control for city-based heterogeneity.

The training centers were helping the respondents find employment during the period when the questionnaire was administered. Some respondents may have felt pressure to answer questions in a positive way. We attempted to avoid this issue by having an RA unrelated to the vocational program administer the questionnaire in a location separate from the training center. However, the issue of social desirability bias might still persist, especially in light of the high degree of power distance that exists in the Indian culture.

Participants may have felt uncomfortable answering truthfully about the training program. Furthermore, we were unable to directly compare the profiles of the respondents with those who did not respond to the survey request. However, the project coordinators at each center confirmed that the respondents are generally representative of the full participant population in terms of family background, education, and intervention participation.

Although many subsistence markets are characterized by cultures that value social relations and kinship ties (Viswanathan, Rosa, and Ruth 2010), in other markets, peer relationships have a weaker influence on people's participation in social interventions. Further research could examine the role that other socialization agents—including family members, teachers, and community leaders—play in the adjustment of marginalized people to interventions. Further research might also consider measuring additional social constructs such as emotional contagion, mirroring among social partners, development of norms, and relationship-oriented issues.

Given that we captured the measures after the respondents had completed the training program, we were unable to examine how their newcomer adjustment changed over the course of the intervention. Research using longitudinal data might shed additional light on the theory we propose by exploring whether people seek approval from different social referents over time and whether their newcomer adjustment evolves over the course of the intervention.

In conclusion, we identify characteristics of a social intervention that, in conjunction with peer influence, affect the socialization of marginalized people in India's sex worker community to the intervention. Our findings can be used to design social interventions with high newcomer adjustment, which in turn will improve subsequent life outcomes—in our case, the securing of gainful employment. We hope our article spurs future studies in this important area.

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