

Experimenting the Role of Pro-sociality on the Effort and Engagement of Nursing Professionals in Sri Lanka

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Introduction

The successful performance of the service sector is highly determined by its labour force due to its extreme dependency on human capital. Nursing professionals are the backbone of the entire health system (Banuri and Keefe, 2016). The prevailing economic crisis has negatively influenced health workers in terms of social and economic aspects (Hu et al., 2020). With the trend of brain drain and existing nursing shortages, public employees often fail to see the prosocial impact of their jobs and many employees are demotivated, burned out, and emotionally fatigued, which had a negative impact on nursing professionals' engagement in hospitals during the prevailing economic crisis in Sri Lanka. The pro-social motivation was a key factor in the pandemic encouraging employees to be mentally and physically prepared for work, particularly in the health sector (Hu et al., 2020). The problem is whether the effort and engagement of nursing professionals depend on the reward-based objective or pro-social-based objective in an economic crisis or turbulent situations (Banuri and Keefer, 2016; Zarychta et al., 2022). For the first time in the Sri Lankan context, a real effort (envelope-stuffing) task was conducted in the hospitals (Lab-in-Field) to measure the effort level of nursing professionals across three different levels of treatments (Zarychta et al., 2022). Also, the video vignette of a patient considering the social status (Poor vs. Non-poor) was used to investigate the significant difference in terms of treatment. The quality of health care is crucial to derive good health outcomes (Banuri et al., 2018) and it can be reliably measured through this experiment.

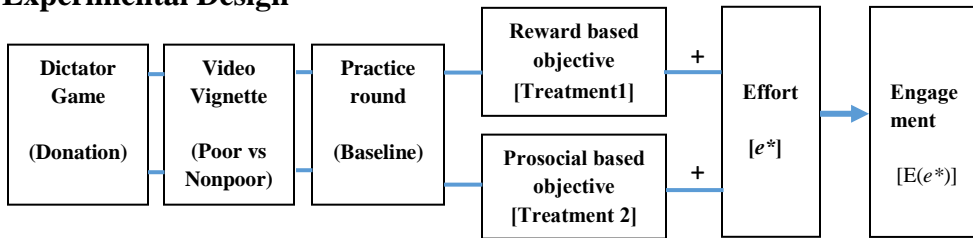
Objectives

One objective was to analyze the degree of pro-sociality among nursing professionals in Sri Lankan hospitals. It is a core objective of the study and is being analyzed from different angles. Another objective was to measure the significant differences in the regular treatment of patients considering their social status. The last objective was to investigate the differences between effort yield when nursing professionals were given reward-based and Pro-sociality based tasks.

Methodology

The Lab-in-Field experiment was conducted in Sri Lankan General (public) hospitals to measure the pro-sociality of the nursing professionals and its impact on effort level and engagement. Pro-sociality was measured using a dictator game and it is about donations for the jobless vulnerable people. Also, a highly reliable standard Likert scale was used to measure the perception of pro-sociality. The treatment differences based on social status were measured using a video vignette survey whereas an experimental act was performed on the lines of a poor patient and a non-poor patient. Nurses were given the record sheet and information sheet consisting of the patient's vital signs, and additional notes along with the patient's history. Then, Nurses could treat the patient with that information and with the video vignette in terms of identifying the correct diagnosis, recommending relevant treatment, follow-up schedule, and alternative treatment if the prior recommendation did not work well. Also, those two different video vignettes were played to different groups of nursing professionals daily. At the final stage, a real effort task was conducted to measure the effort level differences among reward and pro-sociality across nursing professionals belonging to different generations. The first round was a practice round, the second round was treatment-1 which is performed for reward and the final round was treatment-2 which is performed for pro-sociality. The subject in the reward task who completed the maximum number of stuffed envelopes as demonstrated would get a golden star and the picture of a poor family who faced hardship in this economic crisis was shown in the pro-sociality base task. There are 131 nursing professionals selected using a stratified random sampling technique, as the subjects were assigned randomly.

Experimental Design



Source: Author’s compilation adapting Samaranyake and Banuri (2020).

This model was estimated in treatments 1 and 2 compared to the baseline. $BTC=1$; effort level changes compared to the baseline with the introduction of the reward-based task for treatment 1 and with the introduction of pro-social motivation for treatment 2. "x" is a binary dependent variable measuring the relationship between baseline and treatments. The value categories of independent variables are attached in Annexure 1.

$$Pr(BTC_i = 1|x_i) = G(\beta_0 + \beta_1F + \beta_2Ag2 + \beta_3Ag3 + \beta_4Ag4 + \beta_5Ag5 + \beta_6Ag8 + \beta_7Edu2 + \beta_8Edu3 + \beta_9Edu4 + \beta_{10}I2 + \beta_{11}I3 + \beta_{12}HP + \varepsilon)$$

Results and Discussion

Tables: Probit regression results for treatments 1 and 2

BTC1	COEF	P>Z	BTC2	COEF	P>Z
APP	0.350	0.008	APP	0.596	0.000
GDR	-0.041	0.906	GDR	0.029	0.938
AGE			AGE		
2	1.762	0.009	2	1.863	0.003
3	1.419	0.044	3	1.719	0.013
4	0.332	0.671	4	1.641	0.039
5	1.587	0.133	5	-0.579	0.635
8	1.850	0.079	8	0.752	0.449
EDU			EDU		
2	-0.943	0.241	2	0.304	0.687
3	-0.122	0.875	3	0.725	0.322
4	-0.348	0.688	4	1.981	0.040
INC			INC		
2	-0.008	0.984	2	0.990	0.019
3	-0.242	0.718	3	0.930	0.218
4	-1.202	0.359	HP	-0.093	0.823
HP	0.111	0.771	CONS	-5.663	0.000
CONS	-2.784	0.033			

Note: The co-efficient and probability values of variables are given in the Tables, and statistically significant under 95 percent confidence level (Refer to value categories in Annexure 1).

The interpretation of probit regression is a predictive margin change when a predictor changes by a unit, or for a one-unit increase in the effort level, what the changes in z-score value are, compared to the reference level. *BTC 1* represents baseline treatment comparison 1, $\beta_1 F$ represents female nursing professionals, $\beta_n Ag2..$ represents different age groups, $\beta_n Edu2..$ represents educational qualifications, $\beta_n I2..$ represents income categories, and $\beta_n PP$ represents the perception of pro-sociality. Respectively, *BTC 2* stands for baseline treatment comparison 2 and the categorical variables are included in annexure1. The real effort task of pro-sociality when considered through gender-wise analysis revealed that nursing professionals are pro-socially motivated to work hard to help a poor family facing difficulties in this economic crisis. Nursing professionals helped them in terms of completing the maximum number of enveloping tasks and collecting funds from the posting agencies according to the simulation technique. The results of the modified dictator game show that there are significant differences in terms of pro-sociality among nursing professionals in Sri Lanka. Nursing professionals who participated in the non-poor group donated a higher amount of Experimental Currency Unit than the poor group in the dictator game. There is a positive relationship between pro-sociality and the effort and engagement of nursing professionals in Sri Lanka. Nursing professionals with high rewards and pro-social motives put in high effort and engagement in both treatments. However, pro-social motivation yields a greater level of effort and engagement than reward motivation. The video vignette results show that nursing professionals with pro-sociality recommended all relevant medicine to the poor rather than non-poor patients. A significant difference was identified. However, there is no discrimination across social status in recommending the most appropriate treatment. Nursing professionals in Sri Lanka exhibit organizational citizenship or workaholic behaviors in the hospitals.

Conclusion and Policy Recommendations

Pro-social motivation yields a greater level of effort among nursing professionals than the reward motivation. Nursing professionals in their routine work treat all patients equally without any social status bias most of the time. However, treatment recommendations significantly vary between Poor and Non-poor patients in terms of distributing all relevant medicines with reference to this economic crisis. The different treatments for social status can

affect the quality of the health care service. It can be concluded that higher intrinsic (pro-social) motivation or extrinsic (reward) motivation yields a higher level of effort and engagement of the nursing professionals in Sri Lanka. Therefore, the externalities or crisis can affect the personal conditions of the nursing professionals but, it does not impact their professional identity in terms of their routine work. The Government Medical Association and the Ministry of Health can increase awareness of the engagement and effort level of nursing professionals in this economic crisis. The special consideration of generational wise nursing professionals will be beneficial to provide quality service without any social status bias. Also, understanding the mental health status of nursing professionals is beneficial during this economic crisis, which will determine the pro-sociality of the nursing professionals.

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Annexure1 consists of data analysis, value categories & results of probit regression & experimental evidences: <https://drive.google.com/drive/folders/11gYK3gOqDM6R7LyMI6AcrWpcxeRpU8gE?usp=sharing>