

# Art in Health Education: A Transformation in Teaching and Learning About One Self and One's Disease

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**Abstract:** To verify the knowledge gained by hypertensive elderly users of the Brazilian Unified Health System SUS, intervention group, when they have access to the artistic and education video "An Impressioning Story" compared to hypertensive elderly people in the SUS, control group (received a traditional lecture). The video aimed to promote the correct and safe use of medicines, promote knowledge about hypertension and non-pharmacological practices for the treatment of the disease. Methods: A quasi-experiment was carried out to assess the significant knowledge gain before and after the lecture or video. To analyze the results, we performed the Shapiro-Wilks normality test and ANOVA for both groups: Control (N=16) and Intervention (N=17) and internally in the same group. Each group included elderly people belonging to the HiperDia group of the Municipal Community Health Centers (CSC), randomly drawn, belonging to the city of Palmas, Capital of Tocantins. Results: The mean difference value found for the Control Group and the Intervention Group, before and after the application of the lecture or video, were significant for a 95% confidence interval. Indicating that the means found in the pre and post test within the same group ( $p=0.00$ ), as well as the means found between the groups ( $p=0.001$ ) was statistically significant. The ANOVA test compared the knowledge gain between the Control ( $p=0.019$ ) and intervention ( $p=0.000$ ) groups. The Intervention group had greater knowledge gain (0.8 points on average) than the Control Group (0.2 points). Conclusion: From the results obtained, it is concluded that video is a tool that promotes knowledge gain compared to the standard methodology of knowledge transfer (lecture).

**Keywords:** Video, Health Education, Hypertension, Elderly

## 1. Introduction

Art, games, dancing and playing are manifestations that have been present in human life since the beginning of civilization and culture [1]. Playfulness, the ludic, is also part of adult lives, not only children's. This permanent need can be used as a way to mobilize new possibilities, shapes, forms and attitudes to perceive health care [2]. The application of playfulness as a tool to favor learning [3, 4], improving one's [5, 6] health and changing their behavior is shown in many studies.

It is believed that the development of new teaching and

learning methods in health is necessary. Using art, popular culture and transformative educational methodologies, in which to promote dialogue, the problematization and recognition of the knowledge involved in the process, learners/teachers/institutions are conducive to the transformation of social reality and effectively producing results in the health of individuals and communities [7-11].

Audiovisual materials being used in the health field, as means to educate, to inform and promote individual's health has been highlighted in the past years, being a tool which demands little physical structure and offers an easy way for health [12] professionals to utilize, broadcast and disseminate information. The audiovisual strategies develop multiple

perceptive activities, requesting imagination and assigning affectionate meaning to learning [13]; it possesses synthetic language that merges sounds, images, speech and little text, in such a manner that the video connects complex ideas in a more comprehensible form and reaches the target audience through their senses [14]. Furthermore, psychologists are unanimous in affirming that images are a source of information to humans and that about 80% of learning occurs by visual stimuli [15].

In other respects the benefits of audiovisual education material's (AEM) for the education of individuals must be measured in order to assert the validity/dependability of its use. AEM's validation requires, as Doak and collaborators show us, the application of questionnaires by a group of experts/judges and to the community who will receive the video.

Once the video had been validated, a quasi-experiment was executed to verify the effectiveness of the (video) intervention, as a health education strategy for medication users, compared to the usual strategy (educational lecture). In order to fulfill this evaluation questionnaires were applied, pre and post-exam, to assess both control and intervention groups.

## 2. Material and Methods

It involves the realization of the quasi-experiment, with the trial design pre and post-test with the nonequivalent control group, through an educational intervention (artistic video). There is a Control and Intervention Group, in which the intervention is performed in parallel, with no randoming occurrence. The sample of the Intervention and Control Group was selective, by convenience, since they were part of the health field, this sample was composed by individuals who were accessible during the lecture and intervention, in the days of HiperDia group meetings in their respective drug community health centers.

The trial design comparison of pre and post-test on baseline levels existing in the groups (Control and Intervention) include information and have more interpretations possibilities than the pre-experimental studies. However, the Control group was not formed by random distribution. It is a preexisting group that was chosen for

being similar, though not equivalent. Nonetheless, the inclusion of a control-group and a pre-test possibly allows us to discard many threats to internal validity. The Control and Intervention group was composed by 02 Community Health Center (Centros de Saúde da Comunidade - CSC), randomly sorted, among the 10 Health Centers that shared a similar socioeconomic profile to the base group, with whom the video was developed and validated.

## 3. Data Tabulation

For the tabulation of the questionnaire's answers between the Control and Intervention's group, qualitative variables, it was used the absolute frequency according to the Lickert scale of 04 categories (0 to 3) for posterior statistical analysis. We calculated the average reached by each group and we tested the normality, Shapiro-Wilks (S-W). In recent years the S-W test has been preferred to the Kolmogorov-Smirnov due to its ability to adapt to a greater range of problems around normality variation.

After that we utilized Analysis of Variance (ANOVA) for repetitive measures (pre and post-test), to evaluate the possible effects to treatments fulfilled in the same Group (Table 1) and with the Control and Intervention group (Table 2) and adopting significance level of 5% ( $\alpha=0,05$ ).

The nominal qualitative variables considered during the ANOVA were continuous variables and average measures, in which we aimed to verify the independence between the data, according to the hypothesis of nullity and the level of significance established.

## 4. Results and Discussions

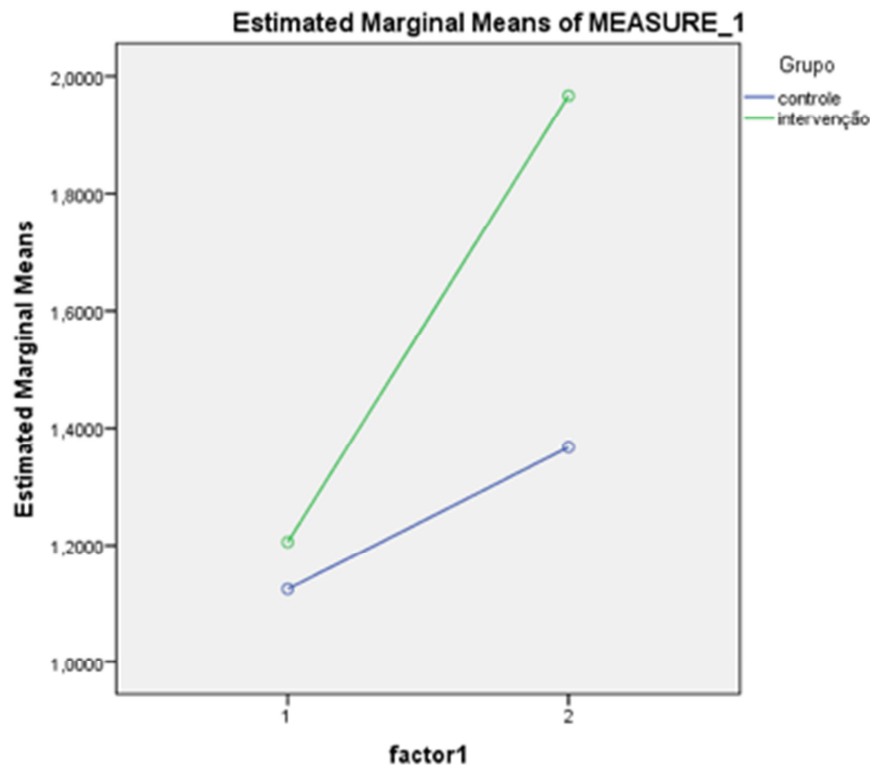
The data shows normal distribution and difference between the averages found in pre and post-test within the same group ( $p=0,000$ ), as with the difference between the averages found in the same groups ( $p=0,001$ ) was statistically significant for the confidence interval. Therefore there is gain in knowledge within the group before and after the lecture application or video. Which can be observed in Table 1\_Values of Average to the Control and Intervention Group.

**Table 1.** Values of Average for Control and Intervention Group.

Group	factor1	Average	Difference Averages	P-value	95% Confidence Interval	
					Lower Bound	Upper Bound
1,0 control	1	1,125	-,242	,000	,989	1,261
	2	1,367	-,242	,000	1,178	1,556
2,0 intervention	1	1,206	-,761	,001	1,074	1,338
	2	1,967	-,761	,001	1,783	2,150

**Table 2.** Average of P-Value to the difference of average for the Control and Intervention Groups at 95% confidence.

Group	factor1	Average	Difference Average	P-value	95% Confidence Interval	
					Lower Bound	Upper Bound
1,0 control	1	1,125	-,242	,019	,989	1,261
	2	1,367	-,242	,019	1,178	1,556
2,0 intervention	1	1,206	-,761	,000	1,074	1,338
	2	1,967	-,761	,000	1,783	2,150



**Figure 1.** Representing the gain of knowledge between Control Group and Intervention.

The graphic illustration (Figure 1) represents the meaningful angulation of the groups' lines, in which one can observe that the Intervention Group's angulation is more accentuated, indicating gain in recognition for both groups, that of the intervention group being greater. Hence the Intervention Group presented a greater gain of knowledge compared to the Control Group.

As there was a significant statistical difference between the gain of knowledge both within the same group, as between the groups, the Control and Intervention groups were compared. The analysis of variance (ANOVA) comparing the groups provided the discovered data for the Control Group ( $p=0,019$ ) and the Intervention Group ( $p=0,00$ ), which allows us to infer that the Intervention Group had the greatest gain in knowledge (about 0,761) compared to the Control Group (0,242). As the adopted scale is of 04 points, the individuals from the Intervention Group gained the average of about 0,8 points in knowledge in comparison to the Control Group. What can be verified in table 2 with the average values to each group and the P-value for the difference between the groups to 95% of confidence.

## 5. Conclusions

The result of health programs and policies in the country are conditioned to the response of individuals, who in turn depend on their habits, routines, behaviors and know-how. Therefore the use of educational alternatives is particularly important, so that the individual's specificities are recognized, benefiting this way the promotion of health of the population as a whole, supporting the understanding, valuing every

single person who is involved in the process of change or reinforcing healthy behaviors and routines, as it is shown by Galgane (2019) in previous published studies. [16].

Hence it is important to foster integrative tools that make possible the development of integral knowledge and understanding between the multiple parts involved in the process of health/disease. Health professionals/individuals must be stimulated and advised always in a non-hierarchical way, respecting the diverse voices and know-hows, favouring the sharing of experience, of context and identities. Enabling individuals to be autonomous, to choose and create possibilities for the development of knowledge and bringing about change in the community, as it presents positive results that were acquired in the construction of audiovisual educational materials suited to each community. [17].

Thus this study verified the effectiveness of the artistic intervention (video), as a strategy for the education of medicine users, compared to the usual strategy, educational lecture. Ergo, it may be inferred that the video "An impressive story" represents a enabler of health education in what concerns the knowledge of hypertension, care, choice, life habits and the correct and safe use of medicines, so it can be a useful tool to the health professionals that work in the primary health care. Corroborating with other findings in literature about the benefits of using video resources for people's health. [12-14]. In that way possibly being used as a tool to lessen the doubts and reinforce attitudes and behaviors to be followed by the individuals, showing itself to be more attractive and practical than the conventional educational interventions.

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