

A Preliminary Study of the Acute Effects of Religious Ritual on Anxiety

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ABSTRACT

Background: Various rituals have been shown to have both psychologic as well as physical effects. However, many rituals have multiple components that can account for such effects. Few studies have distinguished between the effects of ritual and those related specifically to religious content and teachings.

Objectives: The present study investigated the acute effects of the ritual of reciting the Rosary, which contains relatively little specific religious content compared to receiving specific teaching of religious concepts, on the level of anxiety.

Methods: We studied 30 students in a Catholic college divided into two intervention groups. Twelve (12) students participated in recitation of the Rosary, whereas 18 students viewed a religiously oriented video. Both groups were measured for anxiety pre- and postintervention through the use of the State–Trait Anxiety Inventory.

Results: A significant reduction in anxiety was observed in subjects reciting the Rosary compared to the group of subjects watching the video.

Conclusions: These preliminary results suggest that ritual itself may be a significant contributor to the effects of religious practices on psychologic well-being.

INTRODUCTION

A number of studies have suggested that different types of ritual might have an effect on human psychology. For example, meditation-based programs have been shown to improve anxiety and depression scores.^{1–4} The effects of more specifically religious practices on psychologic health have also been investigated. There is considerable literature regarding the effects of religious participation on depression, substance abuse, and delinquency.⁵ However, many of these interventions require a lengthy intervention period and incorporate religious, ritual, cognitive, and affective components, making it difficult to distinguish what aspects are actually producing an effect.

It is the purpose of this preliminary study to focus on the acute psychologic effects of a simple religious ritual, reciting the Rosary. The effects of the Rosary were compared to

watching a religious content video program. This study hypothesizes that a psychologic benefit of the Rosary can be immediately measured as a reduction in anxiety.

MATERIALS AND METHODS

A true pre-test post-test factorial design was employed using two groups: one group participated in the Rosary whereas the other group watched a video dealing with Catholic values and messages. Both groups filled out the State–Trait Anxiety Inventory (STAI)⁶ immediately before and after the treatment condition.

The participants were 30 students, who provided informed consent, from a small Catholic college. Twelve (12) students who were familiar with and had previously been reciting the Rosary on a weekly basis were assigned as the

Rosary intervention group. Eighteen (18) students who were freshmen in an introductory psychology course, but did not normally recite the Rosary, were assigned to the video intervention group.

Subjects in the Rosary intervention group assembled in a campus chapel at the normal time of their weekly Rosary recitation, which lasted approximately 30 minutes. The video intervention group assembled in a classroom at a time dissimilar to the Rosary intervention group and watched a religious-content video (a 30-min talk show about the Biblical Mary and the Holy Spirit). Subjects were asked to fill out the STAI, a two-sided questionnaire (a pre-test) that contains 20 questions on state anxiety (at the moment, situational anxiety) on side one and 20 questions dealing with general anxiety on side two. All subjects were told that they would fill out another, similar questionnaire (a post-test) after the Rosary or the video.

The results of the two groups were compared using a paired *t* test, and a comparison was made between the pre- and post-intervention within-group measures obtained from the STAI. A comparison was also made between the two study groups for both pre- and postintervention values.

RESULTS

The results from the two groups are presented in Table 1. There was no initial significant difference in the means between the Rosary group and the Video group in state anxiety ($p = 0.82$). There was also no initial significant difference in the means between the Rosary group and the Video group in trait anxiety ($p = 0.91$). However, there was a significant change in state anxiety within the Rosary intervention group between pre-test and postintervention means with a percentage improvement of 27% ($p = 0.004$). Also, a significant reduction was found in the postintervention state anxiety scores for the Rosary intervention group compared to the Video intervention group ($p = 0.035$). There was a statistically significant improvement in trait anxiety scores in the Rosary group ($p = 0.006$). However, it is not clear whether this change is clinically relevant since it corresponded to a percentage change of only 10% and there was a large degree of overlap in the scores. The Video group demonstrated no change in trait or state anxiety scores. Also, there was no significant difference between the Rosary and Video group in the pre- or post-trait anxiety scores, respectively.

DISCUSSION

Various studies have shown that meditative rituals decrease anxiety and depression as well as lower blood-lactate levels and blood pressure in the short term.^{2,3,7} Long-term studies of religious attendance have shown that subjects with high religiosity over a period of time (perhaps even a lifetime) experience better health than those with low religiosity.^{8,9} However, it is important to identify the essential components that makes religious experience salutary in its effect.

In the present study, the Rosary was chosen among the various Catholic religious ceremonies available to these researchers because of its high ritual-to-content ratio. In fact, in the sphere of Catholic ceremony (i.e., the Liturgical Mass, Confession, and other paraliturgical devotions), the Rosary is probably the purest ritual ceremony, the one most devoid of specific religious content. Everything about the Rosary, except its purpose, is cognitively and physically ritualistic in form. The fact that the Rosary yielded significant reductions in state anxiety in this study (while the religious-content video does not) suggests that it may not be religious content alone (i.e., the messages and values), but also the ritual aspect of the religious ceremony itself that results in a beneficial effect.

Several important points regarding confounding issues and future studies require mention. To begin with, the Rosary group was made up of students known to have a vested interest in religion and, specifically, the Rosary. This may prevent the present study from being generalizable to the public or to other religious practices because of a possible demand characteristic on the part of the Rosary group that may not have been present in the Video intervention group. In addition, because of the small sample size, future studies should include a larger number of subjects, especially with varying degrees of proficiency in performing the Rosary, so that the actual effects and impact of different variables can be more thoroughly determined. Another possible confounding issue was whether the two groups were similar to each other at baseline and represent a "normal" sample of the population. However, the pre-test state anxiety mean for the experimental group is very similar to the results found in a recent study of 855 college students in an introductory psychology course reported in Spielberger et al.⁶ This finding has two implications: that the Rosary group is relatively representative of the general population and that the effects of performing the Rosary are relatively transitory and do not confer a lower anxiety level at the trait level. On

TABLE 1. EFFECT OF ROSARY AND VIDEO INTERVENTIONS ON STATE AND TRAIT ANXIETY SCORES

<i>Test</i>	<i>Rosary pre</i>	<i>Rosary post</i>	<i>Video pre</i>	<i>Video post</i>
State anxiety	36.1 ± 11.9	26.5 ± 7.0	37.2 ± 13.2	34.1 ± 10.4
Trait anxiety	41.3 ± 11.3	37.0 ± 12.7	40.8 ± 11.8	38.8 ± 12.8

the other hand, since we did not have longitudinal data on the Rosary subjects before they ever began performing this ritual, it is difficult to assess whether their measured baseline levels of anxiety are lower than they would be if they never performed the Rosary. Future studies with longitudinal follow-up will be required to elucidate this issue.

CONCLUSIONS

This preliminary study suggests that ritual interventions, such as the Rosary, may have acute beneficial effects on state anxiety. However, further studies are necessary to clarify this relationship as well as to determine whether there are additional psychologic and possibly physical benefits of ritual in both the acute and long-term setting.

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