Use of Operating Theatre Background Music: Opinion of Patients

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ABSTRACT

Aim: To determine the opinion of patients on the use of operating theatre background music in tertiary health care facilities in Port Harcourt.

Background: Music finds application in almost all spheres of society due to some beneficial effects. It has been used among patients in the intensive care setting, among hypertensives with associated lowering the systolic blood pressure, among endoscopy patients with significantly improved pain score and significantly reduced anxiety, for pain relief and relaxation, and also for expectant mothers in labour.

Materials and Methods: The cross-sectional descriptive study was carried out among patients from March to June 2020 in two multispecialty tertiary healthcare facilities in Port Harcourt Nigeria. Using semi-structured questionnaires and convenience sampling method, 425 respondents were recruited. Data collected was analysed using the Statistical Package for the Social Sciences (SPSS) version 20.0.

Results: Four hundred and two (94.6%) respondents loved listening to music at home. Two hundred and seventy-three (64.2%) respondents preferred to listen to music in operating theatre. Preference for timing of music usage in theatre was variable: before, during and after surgery. One hundred and forty-four (33.9%) respondents asserted that they would love to listen to music in theatre *during surgery*. Two hundred and thirty-three (55.5%) respondents asserted that there was no background music during their last surgery.

Conclusion: Majority of patients were desirous of the use of music in the operating theatre, while a few others thought otherwise.

Keywords: Background Music, Nigeria, Operating Theatre, Opinion of Patients, Port Harcourt, Tertiary Healthcare.

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I. INTRODUCTION

The Biblical story of the playing of music by David to calm “frayed nerves” of King Saul is a ready example of the use of music in society [1], [2]. Music finds application in almost all spheres of society: music and audiovisual media [3], [4]; among the rich and the poor; among the aged and in lullaby for children [5]–[8]; among kings and servants; in military parade and wartime martial music [9]–[11], and in sober mood of religious worship [12]–[14]. Music also find expression in homes [15], [16], and for public entertainment like world sporting competitions [17], [18], to mention but a few. Music can be used to convey some messages and carry along with it some emotions [19], and for cultural identity [20]–[23].

There are different types of music for different purposes, and individual differences exist in their appreciation of music.

Out of the four key human temperaments, individuals with melancholic temperament or a blend thereof are said to like music more than others [24], [25]. Music preferences exist, with some music types tagged more distracting on cognitive function and task performance. A study compared the effect of Mozart classical and rock music on listening comprehension and found no significant difference [26]. However, there are many other studies whose findings fall on both sides of the divide. Music that does not distract a listener from the focus of activity is considered background, and the non-distracting property of this music has been explored in many environments with favorable results [27]–[30].

Though the mechanism of effects is not very clear, reduction in stress response and hence reduction in plasma stress hormone levels has been reported following use of music [31]. Mention has been made of the hypothalamic–pituitary axis, the sympathetic nervous system, and the

immune system, as possible pathway through which music exerts effect on metabolism and energy balance [32], [33]. Another mechanism through which music is said to act is through increase in calcium / CaM-dependent dopamine synthesis in the brain, thus causing a reduction in blood pressure [34]. Also, among the suggested mechanism is the integrative role for complex cortical processes with long-existing reinforcement circuits, and an interaction between sensory processing and decoding mechanisms and affective processing [35].

In this study, the research questions were: does operating theatre background music have any role in healthcare service delivery in modern times? What opinions/perceptions do patients hold on the use of operating theatre background music in our tertiary health care facilities in Port Harcourt? This study was therefore set out to determine opinion of patients on the role of operating theatre background music on patients in tertiary health care facilities in Port Harcourt.

II. METHODOLOGY

A. Study Area

The study was carried in Port Harcourt the capital of Rivers State, Nigeria.

B. Study Place and Period

The specialist surgical outpatient clinics and wards of the University of Port Harcourt Teaching Hospital (UPTH) and the Rivers State University Teaching Hospital (RSUTH) in Port Harcourt were the places the study was carried out, between March 2020 and June 2020.

C. Study Design

A cross-sectional descriptive study.

D. Study Population

Surgical patients in the two tertiary health care facilities constituted the study population.

E. Sample Size Determination

Four hundred was the calculated minimum sample size determined using the formula developed by Yaro Yamen for survey. It was based on estimated population of 10,000 surgical patients. Using the formula:

$$n = N / (1 + Ne^2)$$

where n = minimum sample size, N = Total population size and e = desired precision/level of significance, usually 5% (0.05) at 95% Confidence Interval (CI). Four hundred and twenty-five (425) respondents were recruited.

F. Sampling Technique Procedure

Convenience sampling method was used.

G. Data Analysis

Information on socio-demographic characteristics; role, knowledge, uses of music; perception of patients on operating theatre background music, were collated and analyzed using the Statistical Package for the Social Sciences (SPSS) version 20.0.

III. RESULTS

A total of 425 respondents participated in the study. The demographic characteristics of the respondents presented in Table I indicated that 289 (68.0%) were females while 136 (32.0%) were males. Two hundred and fifty-one (59.1%) respondents were between 25 and 40 years of age. The role, knowledge and uses of music outside hospital setting among the respondents was assessed and presented Table II. Four hundred and two (94.6%) respondents loved listening to music at home. Music preferences of respondents were 75 (17.6%) – classical music, 123 (28.9%) – hymns, 119 (28.0%) – soft music like “blues”. Two hundred and thirty-three (54.8%) respondents felt that music is useful for relaxation, 112 (26.4%) for meditation, 8 (1.9%) for reading, and 28 (6.6%) for work.

TABLE I: SOCIO-DEMOGRAPHIC CHARACTERISTICS OF PATIENT RESPONDENTS (N = 425)

Variables	Frequency	Percentage
<i>Sex</i>		
Male	136	32.0
Female	289	68.0
<i>Age</i>		
Less than 25 years	64	15.1
25-40 Years	251	59.1
41-60 years	85	20.0
Above 60 years	25	5.9
<i>Marital Status</i>		
Single	151	35.5
Married	270	63.5
Divorced	4	.9
<i>Religion</i>		
Christianity	420	98.8
Islam	5	1.2

TABLE II: KNOWLEDGE/USES OF MUSIC OUTSIDE HOSPITAL SETTING (N = 425)

Variables	Frequency	Percentage
<i>Love listening to music at home</i>		
Yes	402	94.6
No	10	2.4
Don't know	13	3.1
<i>Kind of music prefer outside ceremonial occasions</i>		
Classical music	75	17.6
Hymns	123	28.9
Contemporaries	25	5.9
Country music	24	5.6
Soft music (Blues)	119	28.0
Native Songs	38	8.9
Praise and worship songs	21	4.9
<i>Music usefulness</i>		
For relaxation	233	54.8
Meditation	112	26.4
Reading	8	1.9
For Work	28	6.6
For relaxation and meditation	28	6.6
For relaxation, meditation, and work	16	3.8

Table III shows patients' perception on operating theatre background music. Two hundred and seventy-three (64.2%) respondents preferred to listen to music in operating theatre while 96 (22.6%) had no such preference. One hundred and forty-four (33.9%) respondents asserted that they would love to listen to music in theatre during surgery, 54 (12.7%) preferred just after surgery, and 92 (21.6%) preferred listening to background music on all the occasions. Out of the 425 respondents, only 43 (10.1%) affirmed that there was presence of background operating theatre music during their last surgery, while 236 (55.5%) asserted that there was no

background music during their last surgery.

TABLE III: PATIENTS' PERCEPTION ON OPERATING THEATRE
BACKGROUND MUSIC (N = 425)

Variables	Frequency	Percentage
<i>Prefer to listen to music in operating theatre</i>		
Yes	273	64.2
No	96	22.6
Don't know	56	13.2
<i>When preferred to listen to music in operating theatre</i>		
Just before surgery	57	13.4
During the surgery	144	33.9
Just after the surgery	54	12.7
All of the above	92	21.6
None of the above	78	18.4
<i>Presence of background operating theatre music during last surgery</i>		
Yes	43	10.1
No	236	55.5
Can't remember	73	17.2
Not surgery done before	73	17.2

IV. DISCUSSION

Almost two-third of the respondents were females, and most of them were between 25 and 40 years of age. Almost all respondents loved listening to music at home, and hymn and other soft music formed the dominant preference of respondents. This is understandable as the study was carried out in a predominant Christian setting. The pool of opinion of respondents about the usefulness of music showed assertions like – for relaxation, meditation, reading, and for work – in descending order of frequency. The opinion of our respondents is similar to previous studies as some beneficial effect of music has resulted in its application in almost every sphere of human endeavour. Positive effect of music on pain relief, relaxation, and labour for expectant mothers has also been reported [36]-[38]. A study investigated the impact of different types of music (grunge rock, classical, new age and designer) and found significant increase in caring, relaxation, mental clarity and vigour associated with music designed for specific purposes [39].

A certain researcher reported a proportional increase in eating behaviour following increase in the tempo of music among a people who were unaware that such study was being done [40]. Music has been used in the intensive care setting among patients with some reported beneficial effects [41]. Also listening to certain kind of music has been associated to lowering the systolic blood pressure among hypertensives, thereby emphasizing the beneficial effect of music therapy [42]. A meta-analysis indicated that some endoscopy patients had significantly improved pain score and significantly reduced anxiety following use of music, except for patient who had colposcopy and bronchoscopy [43]-[45].

Most respondents would prefer listening to background music in theatre while being operated on. The implication of this is that background music could be used in our operating theatres to draw from the benefits thereof, since most patients have preference for it. There were varied expressions of preference for timing in theatre for listening to background music, with some preferring music in all three phases of the operation – before, during and after surgery. Less than a quarter of respondents actually listened to background music

in their last surgery. This means that we are currently not utilizing background music in operating theatre for our patients.

Limitation of this study is that it was carried out in a hospital setting with a convenience sampling method. A study done among members of the public will further inform on the shape public opinion regarding the use of background music in operating theatre.

Patients in our environment generally love listening to music for several reasons and were aware of the use of music for relaxation among others. Majority were desirous of the use of music in the operating theatre, while a few others thought otherwise. It seems reasonable to observe from the pool of patients' opinion in this study, that use of operating theatre background music do hold some promise and can be explored for the benefit of the patients.

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ETHICAL CONSIDERATIONS

The approval of the research ethics committee of the University of Port Harcourt Teaching Hospital (UPTH) and the Rivers State University Teaching Hospital (RSUTH) were obtained before commencement of study.

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CONFLICT OF INTEREST

None declared.

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