

## Psychological Effects Arising from Infertility amongst Married Women in South-South Nigeria

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### Abstract

Fruits are medicinal and also contain essential phytonutrients that gives the fruits potency that keeps the body healthy. The aim of the study is to ascertain the Effects of Smoothies (banana, apple and pineapple) on Oxidative Stress Markers following administration of monosodium glutamate in Male Wistar Rats. Thirty (30) animals weighing 130kg to 180kg were randomly selected into 6 groups with 5 animals per group. Group 1 received 5mls of distilled water, group 2 received 1ml/kg (low dose) of smoothies, group 3 received 2ml/kg (medium dose), group 4 received 3ml/kg (high dose), group 5 received 400mg/kg of monosodium glutamate, group 6 received 400mg/kg of monosodium glutamate and 3ml/kg (high dose) of smoothies co-administered. Administration was carried out for 14 days and on the 15th day, the animals were sacrificed, semen was harvested and 5ml blood was collected via cardiac puncture. Statistical analysis was done using ANOVA and expressed as Mean±SEM. Statistically  $P < 0.05$  was said to be significant. SPSS version 26 was used. The results showed significant increase in SOD in the group that was administered smoothies (high dose) and decrease in the group that was administered 400mg of monosodium glutamate (MSG). MDA increases in the groups that was administered MSG alone and when co-administered with smoothies (high dose). MDA also decreases in the groups given medium and high dose smoothies. Catalase decrease in the group that was given MSG alone. Gluthione increases in the groups that was given medium and high dose smoothies and decrease in the group that was given MSG only.

**Keywords:** Effects, smoothies, oxidative stress markers, administration, monosodium glutamate.

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### INTRODUCTION

Reproductive process is an important activity that women of reproductive age engaged in at different levels of relationship (Gbaranor *et al.*, 2020a). Continuity in the family is the key reason why a male and a female come together as couple in accordance with their customs, tradition or religion (Gbaranor *et al.*, 2022). This coming together can only be achieved when they have attained reproductive age (Gbaranor *et al.*, 2020a). Desired conception is when both couple agree to

have a child or children based on favourable conditions (Gbaranor *et al.*, 2020a).

Reproduction is an important aspect of African culture with the aim to maintain continuity in the family circle (Gbaranor K. B., *et al.*, 2020b). Delayed in conception among young newly married couples is on the increase across the world. There are rising incidence of delayed in getting pregnant by newly married women and this is worrisome (Okocha, *et al.*, 2023). In African

culture, the desire of a woman of reproductive age is to give birth or have children, especially among married women (Gbaranor K. B., *et al.*, 2020b). However, when this desire is delayed, it becomes a concern to the woman and to the entire family. Every woman is important as far as reproduction or conception is concerned (Gbaranor K. B., *et al.*, 2020b).

The happiness of every husband is to see their wives conceiving at their desired time (Gbaranor K. B., *et al.*, 2020b). Also, married women will be comfortable in their matrimonial homes when conception is not delayed to avoid hate speeches or maltreatment from their in-laws (Gbaranor K. B., *et al.*, 2020b).

The inability to become pregnant after a significant duration of sexual activity without the use of contraception is known as infertility resulting from changes in reproductive factors (Santiago, *et al.*, 2000). Infertility has, as of right now, grown to be a major issue in our society, resulting in a number of psychological trauma cases and even shattered homes (Austin-Asomeji, *et al.*, 2022). Infertility is viewed as a personal or unique tragedy in Sub-Saharan Africa (Ombelet, *et al.*, 2008). In many countries where having children is highly valued, married couples who are childless confront a range of concerns, from outright rejection or divorce to more subtler forms of social humiliation that lead to isolation and mental health problems (Wischnann, *et al.*, 2001; Dyer, 2008; Tebong and Adomgo, 2013).

Delayed conception has brought a lot of psychological effects on women across the globe (Ohaka, *et al.*, 2023). Women who find it difficult to conceive face a lot of problem that may even cause separation or divorce (Ohaka, *et al.*, 2023).

Abuse, hatred, depression and rejection and other psychological trauma are situations undergoes by female who had delayed in conceiving a child (Ohaka, *et al.*, 2023). Delay conception is on the increased and this has caused broken homes and divorce among couples. Psychological stress may contribute to the delayed conception because it can distort the hypothalamo-pituitary-ovarian axis (Ohaka, *et al.*, 2023). This psychological stress can also generate reactive oxygen species (ROS) and this cause imbalance in the hormonal system. Psychological trauma is on the increase among women with delayed conception. (Ohaka, *et al.*, 2023). Majority of the women experienced various degrees of psychological issues such as depression, loss of appetite, isolation, pressure, shame, abuse (Ohaka, *et al.*, 2023).

Previous study also revealed that the participants developed increase in blood pressure and most the women who had delayed conception were pushed out of their matrimonial homes by their husband and in-laws (Ohaka, *et al.*, 2023).

## MATERIALS AND METHODS

This is a cross-sectional study involving married women between the of 18-47 years of age. A well-structured questionnaire was administered to participants (parents/guidance). The participants were recruited from the six states that make up South-South Geopolitical zones. Each participant had one questionnaire to fill appropriately and independently after instructions were given to them by the Research Assistants. The study lasted for a period of 3 months (1st June to August 31<sup>st</sup>, 2024). Statistical analysis of data was done using SPSS Version 25 and P value < 0.05 was considered significant for data.

**Exclusion Criteria:** Women who are below 18 years of age and are not married and do not have interest in having a child irrespective marital status.

**Inclusion Criteria:** Married women that are above 18 years of age and other women of reproductive age who desire to have a child irrespective of marital status.

## RESULTS

The results of age distribution of the participants shows that 20(5.71%) were between the ages of 18-22 years, 80(22.86%) were between 23-27 years, 250(71.43%) were between 28-32 years, 80(22.85%) were between 38-42 years while 70(20.00%) were between 38-42 years while 15(5.29%) were between 43-47 years (Table 1) and 250(71.43%) were married while 100(28.57%) were not married (Table 2). The results revealed that 300(85.71%) of the participants were bordered of not easily conceiving (Table 3), 320(91.43%) are passing through psychological trauma (Table 4), 290(82.86%) are passing through pressure/stress (Table 5) The results also revealed sources of their stress/pressure which include: 50(14.20%) from their husband, 20(5.71%) themselves, 250(71.43%) from in-laws, while 30(8.57%) from friends (Table 6), 320(91.43%) were depressed (Table 7), 320(91.43%) have been abused (Table 8), 300(85.71%) developed high blood pressure (Table 9), and 200(57.14%) of the participants have been pushed out of their matrimonial homes (Table 10).

**Table 1: Age Distribution of Participants**

Age Group	Frequency	Percentage
18-22 years	20	5.71
23-27 years	80	22.86
28-32 years	250	71.43

**Table 2: Marital Distribution of Respondents**

Marital Status	Frequency	Percentage (%)
Married	220	62.86
Single	80	22.86
Divorced	50	14.29
<b>Total</b>	<b>350</b>	<b>100.00</b>

**Table 3: Bordered of not easily conceiving**

Response	Frequency	Percentage (%)
Participants who are bordered of not conceiving	300	85.71
Participants who are not bordered of not conceiving	50	14.29
<b>Total</b>	<b>350</b>	<b>100.0</b>

**Table 4: Participants facing psychosocial trauma**

Response	Frequency	Percentage (%)
Participants who passed through psychological trauma	320	91.43
Participants who do not passed through psychological trauma	30	8.58
<b>Total</b>	<b>350</b>	<b>100.0</b>

**Table 5: Participants passing through pressure/stress**

Response	Frequency	Percentage (%)
Participants passing through pressure/stress	290	82.86
Participants who are not passing through pressure/stress	60	17.14
<b>Total</b>	<b>350</b>	<b>100.0</b>

**Table 6: Source of stress/pressure**

Response	Frequency	Percentage (%)
Husband	50	14.29
Self	20	5.71
In-law	250	71.43
Friends	30	8.57
<b>Total</b>	<b>350</b>	<b>100.0</b>

**Table 7: Depressed participants**

Response	Frequency	Percentage (%)
Depressed participants	320	91.43
Not depressed participants	30	8.57

**Table 8: Abused participants**

Response	Frequency	Percentage (%)
Abused participants	320	91.43
Participants that were not abused	30	8.57
<b>Total</b>	<b>350</b>	<b>100.0</b>

**Table 9: Participants who developed high blood pressure**

Response	Frequency	Percentage (%)
Participants who developed high blood pressure	300	85.71
Participants who do not developed high blood pressure	50	14.29
<b>Total</b>	<b>350</b>	<b>100.0</b>

**Table 10: Participants pushed out of their matrimonial homes**

Response	Frequency	Percentage (%)
Participants pushed out of their matrimonial homes	200	57.14
Participants who were not pushed out of their matrimonial homes	150	42.86
<b>Total</b>	<b>350</b>	<b>100.0</b>

## DISCUSSION

Psychological trauma arising from infertility among women of reproductive age is on the increased and this has caused a lot of havoc to women. Pressure from husband, in-laws and friends placed a married woman who has not conceived into psychological trauma. It is important to know that when women are yet to conceive, they are always in a bad mood and this condition can worsen the situation. Infertility in some community in Africa is a taboo and must be corrected. The essence of marriage in African perspective is for child bearing to represent the family lineage in the future and when this aim is not actualized, the man and woman who both couples will not happy and this situation lead them into several degree of psychological trauma. The results of the findings shows that majority (71.4%) were between 28-32 years of age and this shows that they were in their active reproductive age. Sometimes, advanced age is a risk factor for infertility but these women were already in their reproductive age. Most (62.9%) of the participating women were married and of course you know that they need to be pregnant to make their husband, in-laws, friends and their own biological parents. In Africa, when a married woman is yet to be pregnant, it does not affect only her in-laws, rather it also affects her own parents.

The study revealed that majority (85.7%) of the participating women were really bordered about the situation they find themselves and because they were bordered, they may be victims of psychological trauma. The study also shows that 91.4% of the women passed through psychological trauma and this is worrisome and may further complicate the delay in getting pregnant. The women who were bordered, also revealed that their husband and their own biological parents were bordered about the situation they find their wife and daughter. Also 82.9% of the participants were passing through pressure/stress. Stress is a parameter that may further complicate infertility because it causes changes in the circulating levels of reproductive hormones. In chronic stress, there may be suppression of gonadotrophic hormones (Follicle stimulating hormones and Luteinizing hormones) and this could lead to disruption of monthly regular menstrual cycle. Increase stress also causes the release of cortisol and thus this in turn triggers the suppression of reproductive hormones. However, these women that are passing through stress revealed various sources of their stress/pressure and these include: husband, themselves, in-laws and friends. The study shows that most the women were pressured by their husband, in-laws and friends on the issue of delayed in conception. In Africa, majority of husbands and in-laws mouth pressure on their wives who have delayed in conception thus, exposing their wives to psychological trauma. The study revealed that 71.4% of the participants said that their husband is planning to marry a new wife. Majority of women are jealous and do not like to pair a man with another woman. On getting this information of

their husband bringing in a new wife makes them to be sober and unstable in reasoning. In Africa, majority of men when they marry a new wife, they abandon the first wife by withdrawing their love, care and support and sometimes go further to neglect them as when as abused them and peradventure the new married wife delivers, then the old wife or first would not be seen as anybody in her matrimonial home. This intake of new wife by their spouse becomes a problem that may never end in their life and this contribute to the psychological trauma they passed through and experienced due to infertility.

Depression was one of the psychological traumas that the participants passed through and 91.4% of them (participants) had depression due to infertility. Again, majority (91.4%) of the women who were having infertility were abused by their husband, in-laws and friends. These abused were perpetual and thus exposed the women to various forms of psychological trauma and 85.7% of them had increased in their blood pressure.

Also, the findings revealed that 57.1% of the participants who were having infertility were pushed out of their matrimonial homes by their husband or in-laws. This act tends to push some of the affected women to commit suicide and some were completely isolated from social gatherings due to shame and humiliation.

## CONCLUSION

Psychological trauma arising from infertility is on the increased and this has caused a lot of havoc to women. The study revealed that those participants who have infertility issues were passing through several degrees of psychological trauma including depression, bordered, stress/pressure, humiliation, suicidal threat, isolation, elevated blood pressure and sending them out of their matrimonial homes.

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