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Research Article

PERCEIVED HEALTH IMPACT OF LOCKDOWN IMPOSED DURING THE COVID-19 PANDEMIC AMONG RESIDENTS OF JALINGO, TARABA STATE

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ABSTRACT

Complete or partial lockdown enforcement was set in the countries around the world; this hindered the daily routines inflicting hardship on almost the whole of the world. This study aimed to assess the perceived health impacts of the Covid-19 lockdown in Jalingo, Taraba State. A total of 399 questionnaires were distributed among participants within the study area. Findings revealed significant gender differences in perceptions: 57% of males and 39% of females reported negative impacts on accessing health services during lockdown. Similarly, 56% of males and 26% of females expressed concerns about the lockdown's effects on family planning. The impact on daily meal intake was noted by 56% of single individuals and 38% of married individuals. Moreover, the study highlighted that 88% of respondents believed the inability to participate in religious activities due to lockdown increased the likelihood of depression, while 96% felt similarly about the inability to engage in business or job activities. Interestingly, 59% of males and 29% of females supported lockdown as an effective measure against Covid-19 spread, reflecting gender differences in opinion. The study recommends that governments provide adequate support and palliative care, recognizing the economic and psychological stresses induced by lockdown measures.

Key Words: Covid-19, Pandemic, Lockdown, Health psychology, Quality of life

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INTRODUCTION

Since the disease first emerged in China (Wuhan), the causative organism (virus) has begun to have devastating effects worldwide, except Antarctica (Rahman *et al.*, 2020). The major symptoms of the disease (COVID-19) include fatigue, muscle pain, fever, dry cough, dyspnea, and shortness of breath (Riou *et al.,* 2019). The lung is the most affected organ as the virus enters via angiotensin-converting enzyme 2, which is most common in her type 2 alveolar cells in the lung (Zhang *et al.,* 2020). Due to a lack of sufficient knowledge about the disease, health systems in third- to first-world countries struggle to treat the vast numbers of infected COVID-19 patients (Paul *et al.*, 2020). As COVID-19 spread through social contact and there was no medicine to cure the

disease, billions of people around the world have been affected by lockdown measures to minimize infection rates (Memish *et al.,* 2019). To combat the impact of COVID-19 and have enough time, we need more people around the world in terms of testing, isolation, contact tracing, social distancing, home quarantine, self-quarantine, maintaining hygiene and using personal protective equipment. active participation of all people in Develop therapeutic strategies (Hellewell *et al.,* 2020). However, different levels of knowledge, attitudes and practices for COVID-19 pandemic prevention strategies pose challenges in many countries (Sakib *et al.,* 2020).

During a pandemic, the psychological response of the populations to infection plays a relevant role in the spread and containment of the disease, influencing the extent to which psychological distress and social disruption occur (Taylor, 2019). And this may be partly deduced by the emotional states that often characterize pandemics, such as uncertainty, confusion and a sense of urgency (WHO, 2015). In the first phase of a pandemic, there is huge anxiety and this is due to fear of being infected and inadequacy of correct information on how best to prevent and control (Taha *et al.,* 2014). In addition, pandemics are associated with various psychosocial stressors, including health threats to ourselves and loved ones. Significant adjustment in daily life, such as restriction of physical activity (Carriedo *et al.,* 2020), separation from love ones (friends and family), medication and food shortages; lost wages; and being socially isolated due to quarantine or other social distancing measures. Severe financial hardships can also arise when a family's primary breadwinner becomes ill and unable to work (Taylor, 2019).

For these reasons, the current effects of the COVID-19 pandemic are more pronounced than the purely physical effects of the infection, are far-reaching, long-lasting, and affect people's actual life quality and perceived life quality. The disease period (COVID-19 pandemic), which has swept the world over the past 12 months, has actually put a strain on human ability to handle with events and revolutionized daily lives. In Italy, an emergency state of was declared by the Italian government on January 31, 2020, in Rome two Chinese tourists who were positively tested for his SARS-CoV-2. The first disease case in Italy was registered in February 2020 and the epidemic spread rapidly, reaching 220 infected people on 24 February. The government responded by implementing preventive measures and infection control on March 11, when the people infected reached 12,462 and the total death toll reached 827. Despite the different ways of spreading the infection in northern and southern Italy, increasingly restrictive containment measures end to a complete lockdown across the country (from March 11, 2020 to May 3, 2020). Lockdown measures included forced closure of schools, closure of non-essential commercial activities and industries, and restrictions on domestic and international travel. Since May 3, the number of infected people has fallen below 1221 and many restrictions have been gradually eased. On 3 June, freedom of movement between the European countries was restored and other non-essential activities resumed.

An early study on the COVID-19 impact on human psychology during the pandemic which is compared situation of the 2003 SARS epidemic (Qiu *et al.,* 2020). These studies highlight the risk that people with suspected or confirmed infections experience long-term and uncontrollable anxiety, not only about the disease but also about quarantine. During the preceding SARS epidemic, peak incidences of many psychiatric disorders such as depression, anxiety, panic attacks, psychomotor

agitation, and suicide were reported. Emphasizing the long-term health impact of the pandemic, Kwek and his colleagues argued that SARS had significant impacts on both qualities of life and mental health functionality three months after an acute episode (Kwek *et al.*, 2006). A small number of additional studies conducted during previous pandemics also showed the negative effect of pandemics on the mental condition of affected victims and was confirmed to have association with greater psychological distress, including sociodemographic variables such as: Various factors were highlighted, older or less educated (Taha *et al.*, 2014). In addition, some studies recently reviewed by Brooks and others reported negative psychological effects of quarantine, including symptoms of post-traumatic stress, confusion, and anger, include lengthy isolation periods, fear of contagion, frustration, boredom, inadequate provision of personal safety systems, inadequate information, economic loss and social stigma (Brooks *et al.*, 2020). This evidence is further supported by increasing cases of mental condition publications showing a high rate of mental distress in the population during the period of the pandemic. A large Italian study by Rossi and colleagues showed an increase in the symptoms of depression and anxiety in people locked down for four weeks, finding that 37% of the sample had post-traumatic stress symptoms. Deteriorating mental health (Rossi *et al.*, 2020). However, while the mental condition impact of COVID-19 has received increasing attention, the rate of international studies on its impact on life quality is limited. Study by Pieh *et al.* (2020) exposed that the average psychological score on WHO's BREF Questionnaire on life quality (WHOQOL-BREF) was seen to be significantly lower when compared to a study published in 2015. Austria, p. and others. (2015); the study also reported lower scores among young adults, women, the unemployed, and low-income individuals. Horesh *et al.* (2020) also reported higher stress levels and lower QoL among women, younger participants, and participants with pre-existing chronic conditions. However, to our knowledge, no studies have investigated the life quality of Italians during the period of the pandemic (Wang *et al.*, 2020).

RESEARCH METHODOLOGY

This study employed a descriptive cross-sectional survey to assess the perceived health impacts of the Covid-19 lockdown among residents of Jalingo, Taraba. Jalingo (figure 1), situated in northeastern Nigeria between 8° 47'30" and 9°0'0" north latitude, and 11° 18'30" and 11°32'15" east longitude, has a tropical climate with distinct dry and wet seasons. The population, estimated at 118,000 based on the 2006 census, engages mainly in agriculture, supported by diverse vegetation and numerous medical facilities including primary, secondary, and tertiary care, as well as private and religious facilities.

The study population comprised adults over 18 years old, mentally stable, and willing to participate. Using Taro Yamane's formula for sample size calculation, with a population estimate of 139,845 and a margin of error (e) of ±0.05 at a 95% confidence level, a sample size of approximately 399 was determined. Participants were selected through simple random sampling.

Data were collected via structured questionnaires, divided into sections covering socio-demographic information, perceived negative effects of Covid-19 lockdowns, recognition of positive impacts, acceptance of lockdown measures, and overall impact assessments. The collected

data were analyzed using SPSS software, with results presented through figures and tables.

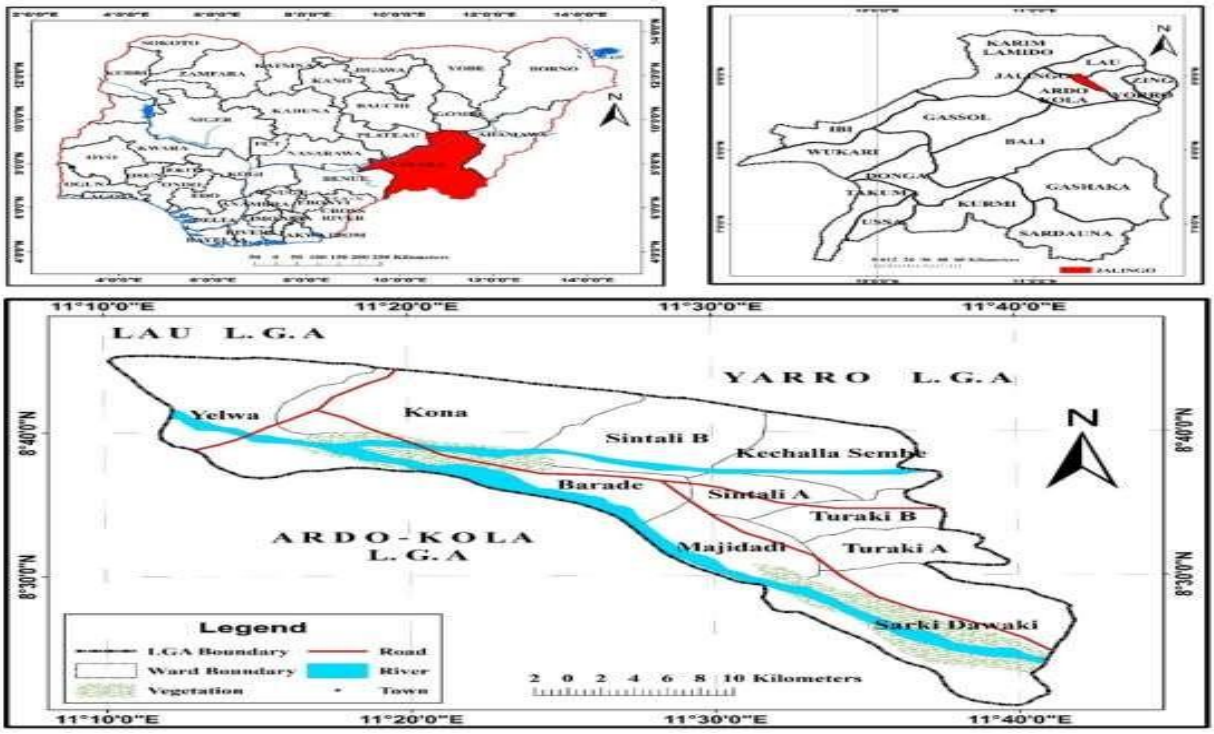

Plate 1: Map of Jalingo Local Government Area (Source: Adapted from Administrative Map of Taraba State, 2021).

RESULTS

From the findings (figure 2), 56% of males and 26% of females reported that the lockdown had a negative impact on practicing family planning. The data showed significant gender differences, with more males expressing concerns about family planning disruptions compared to females.

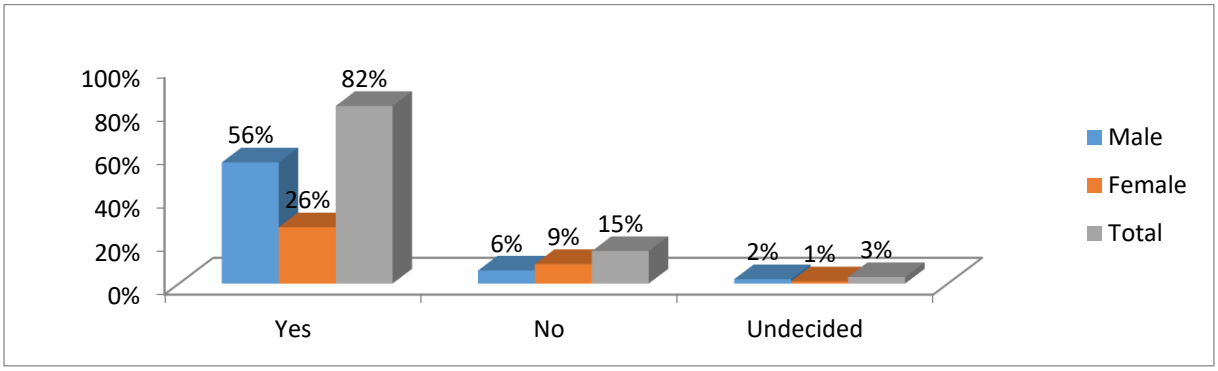

Figure 2: Participants' responses in relation to gender on perceived negative impact of lockdown on practicing family planning. *Summary of statistical Analysis: X^2=16.025, df=2, p-value=0.02.

The survey results indicated that 42% of single individuals and 32% of married individuals believed that the lockdown had a negative impact on their ability to practice family planning. The data revealed notable differences based on marital status, with more singles than married individuals perceiving adverse effects on family planning practices (figure 3).

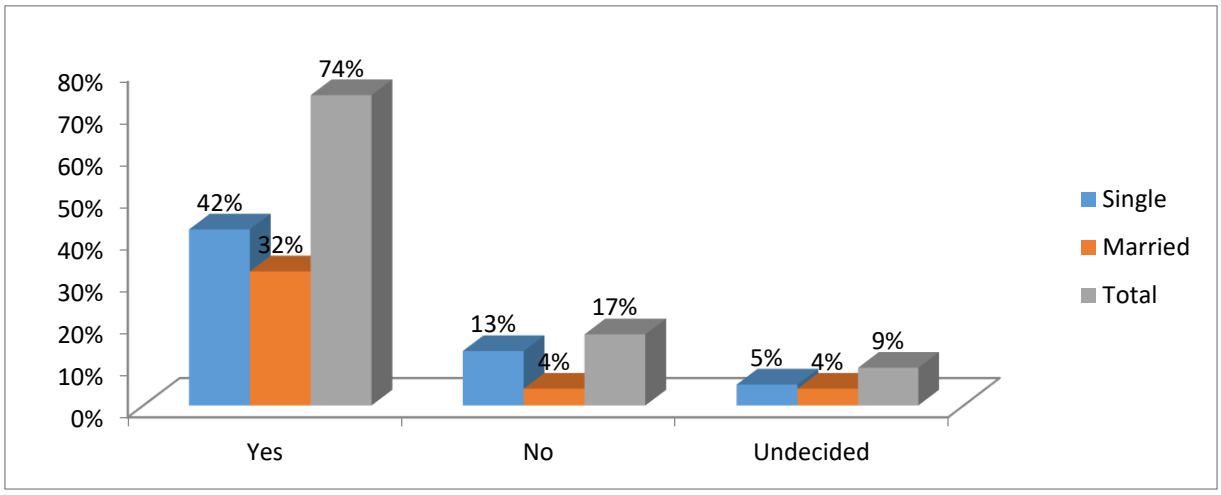

Figure 3: Participants' responses in relation to marital status on perceived negative impact of lockdown on practicing family planning. *Summary of statistical Analysis: χ^2=0.929, df=2, p-value=0.629

From the survey results above (figure 4), 88% of respondents indicated that the inability to participate in religious activities due to the lockdown caused discomfort. This highlights a significant impact on individuals who derive emotional, spiritual, and even material support from their religious communities.

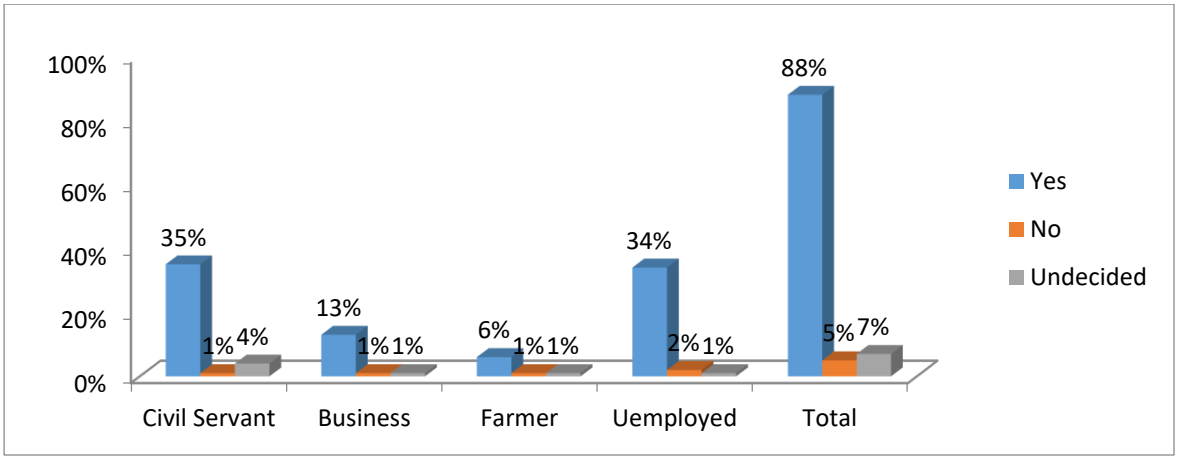

Figure 4: Participants' responses in relation to occupation on feeling of distress as a result of not participating in religious activities due lockdown. *Summary of statistical Analysis: χ^2=12.482, df=2, p-value=0.002.

According to the survey findings, 96% of respondents expressed that the inability to attend to their business or job activities due to lockdown caused them distress, with only 4% indicating otherwise and no respondents remaining undecided. This disparity underscores a significant impact on participants, particularly in their professional lives (figure 5).

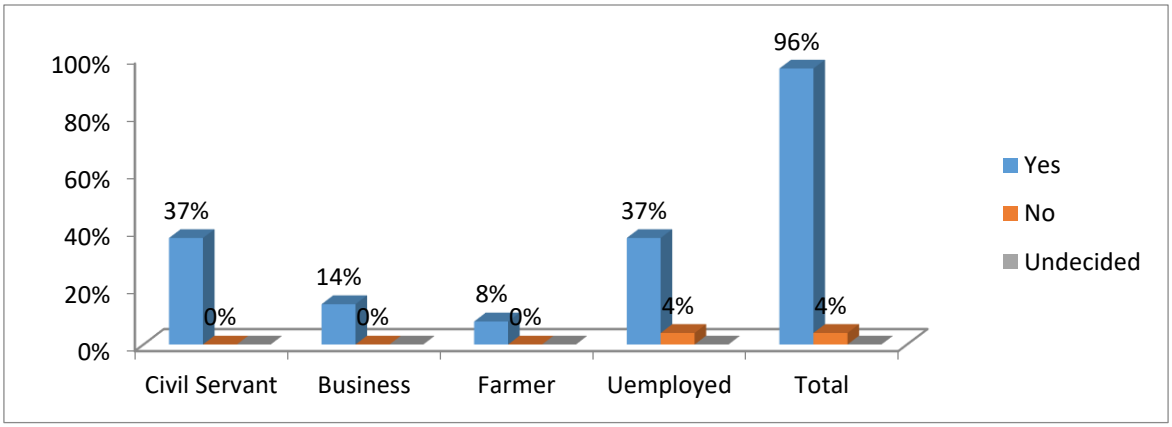

Figure 5: Participants' responses in relation to occupation on feeling of distress as a result of not having the avenue to attend to one business or job activities due lockdown
***Summary of statistical Analysis: χ^2=18.675, df=8, p-value=0.017.**

According to the survey results, 74% of participants agreed that lockdowns had a positive effect on reducing alcohol and substance abuse, while 17% disagreed and 6% were undecided (figure 6). This trend varied across educational qualifications, with a majority indicating reduced alcohol intake during lockdown periods.

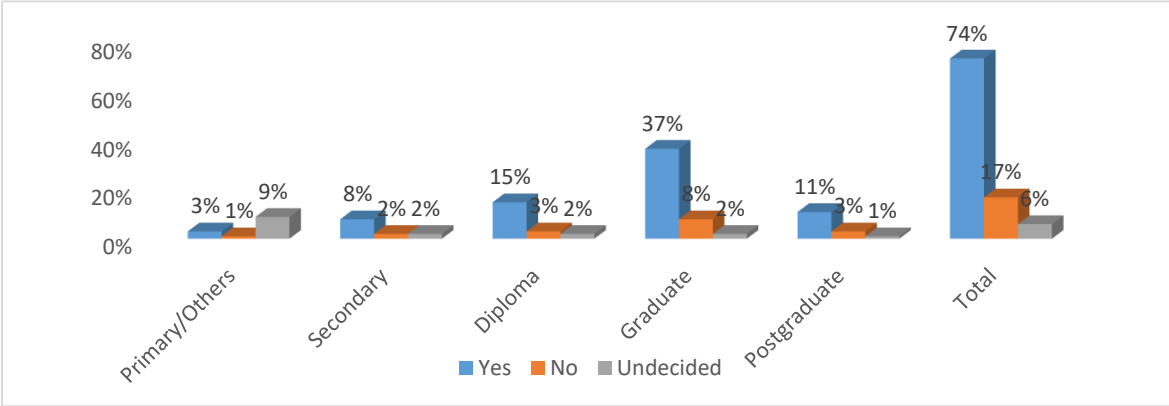

Figure 6: Participants' responses in relation to educational background on perceived positive impact of lockdown in reduction of alcohol intake and substances abuse.
***Summary of statistical Analysis: χ^2=49.008, df=8, p-value=0.002.**

According to the survey results, 50% of single individuals and 35% of married individuals reported that lockdown had a positive impact on reducing sexual activity, potentially lowering the risk of sexually transmitted infections (figure 7). This response varied significantly based on marital status, with a higher proportion of singles than married individuals perceiving reduced sexual activity as a positive outcome of lockdown measures.

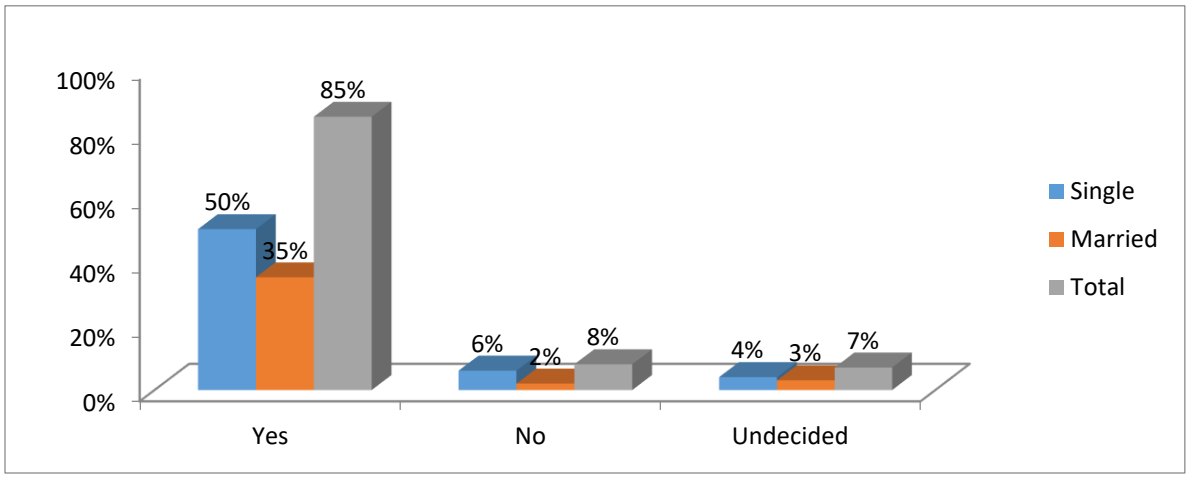

Figure 7: Participants' responses in relation to marital status on perceived positive impact of lockdown in reduction of sexual activities. *Summary of statistical Analysis: χ^2=49.008, df=8, p-value=0.002.

According to the survey findings, 60% of males and 33% of females agreed that lockdown had a positive impact on reducing accidents, particularly on the roads (figure 8). This perception was consistent across genders, with a majority indicating that travel restrictions implemented to curb the spread of Covid-19 contributed to a decrease in accident rates, especially severe incidents.

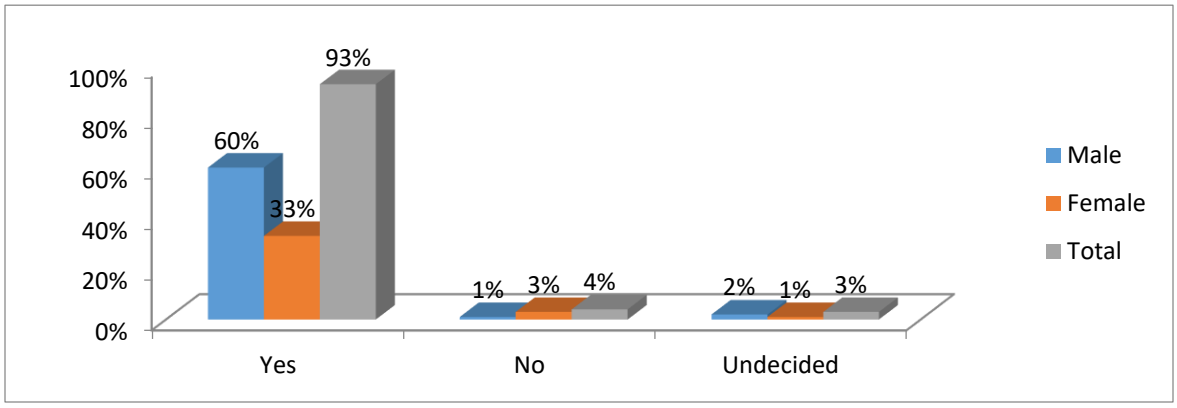

Figure 8: Participants' responses in relation to gender on perceived positive impact of lockdown in reduction of road accidents. *Summary of statistical Analysis: χ^2=54.511, df=8, p-value=0.000.

According to the results, 59% of males and 29% of females responded affirmatively that lockdown was the most effective measure in reducing the spread of Covid-19 infection. This indicates a higher acceptance among males compared to females (figure 9).

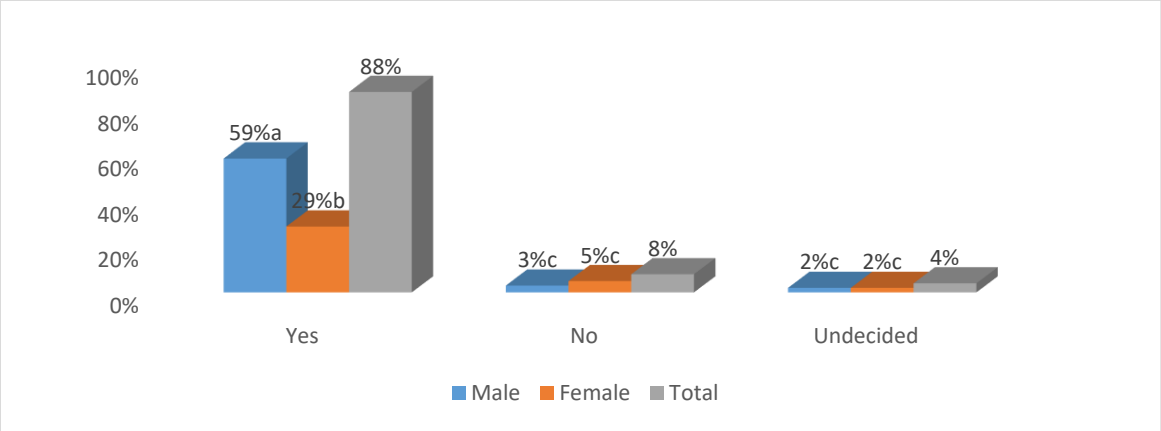

Figure: 9: Participants' responses in relation to gender on acceptance of lockdown as the best approach in reducing the spread of Covid-19 infection. *Summary of statistical Analysis: χ^2=42.504, df=6, p-value=0.000.

Based on the findings, 32% of males and 33% of females expressed a preference for alternative approaches over lockdowns to limit the spread of Covid-19 infection during the pandemic. This indicates a similar distribution of responses across genders.

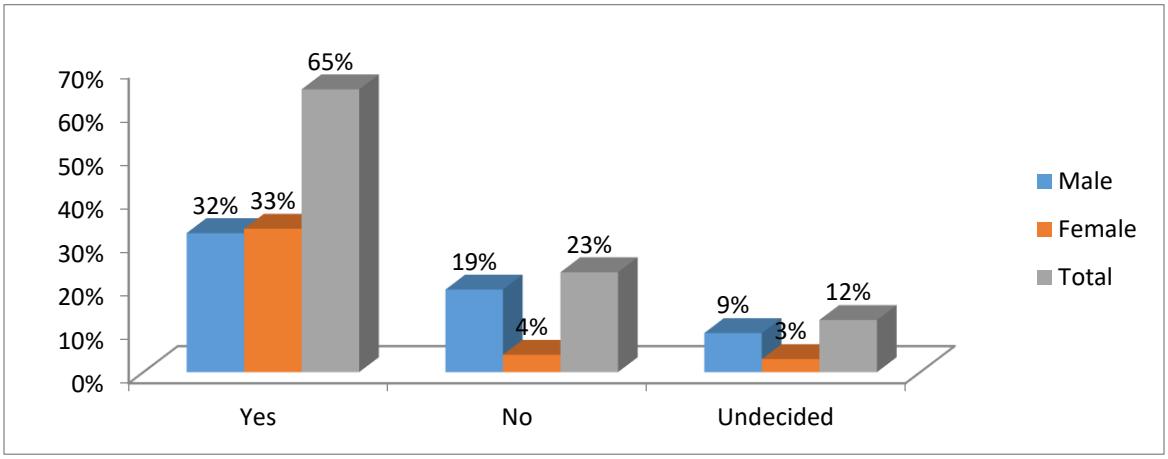

Figure 10: Participants' responses in relation to gender on the preference of alternative approach in place of lockdown to curb the spread of Covid-19 infection. *Summary of statistical Analysis: χ^2=3.995, df=4, p-value=0.407.

Table 1: Participants' responses on daily rate of time usage duration for personal development before, during and after the lockdown based on marital status

Duration	Before Lockdown		During Lockdown		After Lockdown	
	Single	Married	Single	Married	Single	Married
1 to 3 hours	94(24)	53(13)	97(24)	42(11)	100(25)	53(13)
4 to 7 hours	102(26)	61(15)	94(24)	67(17)	92(23)	59(15)
8 & above hours	43(10)	46(12)	48(12)	51(13)	47(12)	48(12)
Total	239(60)	160(40)	239(63)	160(40)	239(60)	160(40)

The study found that 10% of singles and 12% of married individuals allocated 8 or more hours to personal development before the lockdown, with these figures increasing to 12% and 13% respectively during the lockdown. Post-lockdown, the percentages remained stable at 12% for both groups. The responses regarding daily time spent on personal development before, during, and after the lockdown were similar for both singles and married individuals (table 1).

Table 2: Participants' responses on family daily meal intake before, during and after the lockdown based on educational qualification

Qualification	Before Lockdown			During Lockdown			After Lockdown		
	Once	Twice	Thrice	Once	Twice	Thrice	Once	Twice	Thrice
Primary/NFE	0(0)	0(0)	4(1)	0(0)	4(1)	0(0)	0(0)	4(1)	0(0)
Secondary	4(1)	7(2)	30(7)	4(1)	17(4)	20(5)	4(1)	7(2)	30(8)
Diploma	0(0)	20(5)	58(14)	20(5)	31(8)	27(7)	8(2)	44(11)	26(7)
Graduate	5(1)	39(10)	172(43)	30(8)	110(28)	76(19)	9(2)	51(13)	156(39)
Postgraduate	0(0)	17(4)	43(11)	0(0)	15(4)	45(11)	0(0)	20(5)	40(10)
Total	9(2)	83(22)	307(76)	34(14)	171(45)	168(42)	21(5)	126(32)	252(64)

The study uncovered that before the lockdown, 76% of families reported eating three meals a day. However, this percentage decreased sharply to 42% during the lockdown, before rebounding to 64% after restrictions eased. Interestingly, participants with postgraduate qualifications indicated that their family's meal frequency remained consistent—three meals a day—across all phases: before, during, and after the lockdown (table 2).

Table 3: Participants' responses on involvement in physical exercise before, during and after the lockdown based on occupation

Occupation	Before Lockdown			During Lockdown			After Lockdown		
	Daily	OAW	NAA	Daily	OAW	NAA	Daily	OAW	NAA
Civil Servant	49(12)	37(9)	61(37)	35(9)	30(8)	82(21)	41(10)	67(17)	39(10)
Business owners	0(0)	24(6)	31(8)	16(4)	12(3)	27(7)	8(20)	16(4)	31(8)
Farmers	13(3)	13(3)	4(1)	12(3)	8(2)	10(3)	13(3)	9(2)	8(2)
Unemployed	67(17)	34(9)	66(17)	71(18)	22(6)	74(17)	72(18)	40(10)	55(14)
Total	129(32)	108(27)	162(41)	134(34)	72(18)	193(48)	134(34)	132(33)	133(33)

Key: OAW=Once a week
NAA=Not at all

The study found that 17% of unemployed individuals engaged in daily exercise before the lockdown, with this figure slightly increasing to 18% during the lockdown and remaining stable at 17% after the lockdown. Comparatively, participants across different occupations reported similar rates of physical activity participation before, during, and after the lockdown (table 3).

Table 4: Participants' responses on family income before, during and after the lockdown based on employer

Employer	Before Lockdown			During Lockdown			After Lockdown		
	Increase	Decrease	Same	Increase	Decrease	Same	Increase	Decrease	Same
Private	130(33)	36(9)	53(15)	12(3)	172(43)	40(10)	93(33)	67(17)	64(16)
Government	66(17)	20(5)	27(7)	4(1)	90(23)	19(5)	42(11)	46(11)	25(6)
Self/others	15(4)	12(3)	35(9)	0(0)	52(13)	10(3)	18(5)	32(8)	12(3)
Total	211(53)	68(17)	120(30)	16(4)	314(79)	69(17)	153(38)	145(36)	101(25)

The study revealed significant reductions in monthly income among participants employed in the private sector, with decreases noted at 9% before the lockdown, 43% during the lockdown, and 17% post-lockdown (table 4). However, all participants reported experiencing income declines during these periods

Table 5: Participants' responses on feeling of sadness/restlessness before, during and after the lockdown based on gender

Gender	Before Lockdown			During Lockdown			After Lockdown		
	Occasionally	Always	Never	Occasionally	Always	Never	Occasionally	Always	Never
Male	200(50)	4(1)	50(13)	94(24)	136(34)	21(5)	191(48)	19(5)	44(11)
Female	100(25)	27(7)	18(5)	49(12)	84(21)	12(3)	102(26)	19(5)	44(11)
Total	300(75)	31(8)	68(17)	146(37)	220(51)	33(8)	293(73)	46(12)	60(15)

Male participants indicated a notable increase in feelings of restlessness, rising from 1% before the lockdown to 34% after it. In comparison, female participants reported an increase from 7% to 21% over the same periods (table 5). Additionally, male participants reported higher levels of anxiety compared to females both before and during the lockdown.

DISCUSSION

The survey revealed that there were significant gender differences in the perception of lockdown's impact on family planning practices, with 56% of males and 26% of females reporting negative effects. This disparity suggests that men perceive lockdown measures as affecting family planning decisions differently than women. Previous research has highlighted that men often rely on their partners to manage family planning decisions and contraceptive use to prevent unplanned pregnancies (Zimmerman *et al.,* 2020). In terms of marital status, 42% of single individuals and 32% of married individuals believed that the lockdown negatively impacted their ability to practice family planning. This suggests that lockdown measures could potentially exacerbate challenges in accessing family planning services for married individuals, contrary to the perception among singles in the survey. Research conducted before the pandemic indicated that unmarried sexually active women had higher unmet family planning needs compared to their married counterparts (NPC, 2019). The perceived impact of lockdown on family planning highlights the need for targeted interventions to ensure continued access to family planning services, particularly for men and married individuals who may face unique challenges. This could involve increasing awareness and availability of family planning resources during such restrictive periods.

A significant portion of respondents reported discomfort due to the inability to participate in religious activities (88%) and attend to business or job activities (96%) during the lockdown. The absence of communal religious gatherings deprived many of emotional and spiritual support, leading to increased levels of anxiety and depression (Pirutinsky *et al.,* 2020). Similarly, job insecurity and financial instability contributed to heightened emotional discomfort and distress (Blanusa *et al.,* 2021). These findings underscore the importance of providing mental health support and alternative means of social connection during lockdowns. Policies should focus on mitigating the negative psychological impacts of lockdown by ensuring continuity of support systems and financial stability for individuals.

The survey found that 74% of participants believed lockdowns had a positive effect on reducing alcohol and substance abuse. This perception may be attributed to stringent enforcement measures that restricted access to venues like clubs and bars (Ahmed *et al.,* 2020). Additionally, 50% of single individuals and 35% of married individuals reported that lockdowns reduced sexual activity, potentially lowering the risk of sexually transmitted infections. The perceived reduction in alcohol intake and substance abuse, as well as sexual activity, during lockdowns suggests that restrictive measures can have some beneficial effects on public health. These findings can inform strategies to address substance abuse and promote safe sexual practices during and beyond pandemic periods.

A significant majority of respondents (59% males and 29% females) affirmed that lockdown was the most effective measure in reducing the spread of COVID-19. This supports evidence from Yang (2020) that lockdowns effectively reduce population mobility and slow the spread of infection. However, there was also a notable proportion (32% males and 33% females) who preferred alternative approaches to lockdowns. The varied acceptance of lockdown measures highlights the need for balanced public health strategies that consider the diverse preferences and needs of the population. Communication and engagement with the public about the effectiveness and necessity of different measures are crucial.

The study found similar patterns in daily time spent on personal development before, during, and after the lockdown among singles and married individuals. This consistency may be influenced by environmental changes leading to new coping strategies and personal growth (Karagiannidis *et al.,* 2015). Encouraging personal development activities during lockdowns can positively impact mental health and well-being. Providing resources and opportunities for such activities should be a component of public health strategies during restrictive periods.

The survey revealed fluctuations in meal frequency, with a notable decrease during the lockdown and a rebound afterward. Participants with postgraduate qualifications reported consistent meal frequencies across all phases. These findings highlight the financial impact of lockdowns on families' ability to maintain regular meal schedules. Public health interventions should focus on ensuring food security and support for families during economic downturns caused by restrictive measures.

The study observed consistent levels of physical activity across different occupations before, during, and after the lockdown. This may be due to individuals maintaining or slightly increasing their exercise routines at home to cope with mental health challenges (Ammar *et al.,* 2020). Promoting physical exercise as a means of coping with the psychological impact of lockdowns is essential. Public health policies should support access to safe exercise opportunities during such periods.

There were significant reductions in monthly income among participants, particularly those employed in the private sector, during and after the lockdown. This aligns with reports highlighting substantial income reductions and job losses during lockdowns (OECD, 2020). The financial instability caused by lockdowns necessitates robust economic support and job protection measures. Public health strategies should include economic relief and support programs to mitigate the financial impact on individuals and families.

CONCLUSION AND RECOMMENDATIONS

Conclusion

Based on the findings, it can be inferred that COVID-19 lockdowns had both beneficial and detrimental effects on health, with the negative impacts being particularly significant. Restrictions on activities such as access to health services, exercise, daily meals, business operations, religious gatherings, and educational activities were widespread during the lockdowns. The inability to engage in these essential activities contributed to negative health outcomes, including feelings of restlessness and depression among individuals. Interestingly, lockdowns also resulted in some positive health outcomes, such as reduced alcohol consumption and fewer accidents. These changes were likely influenced by the limitations on social gatherings and reduced mobility imposed by lockdown measures.

Recommendations

i. Recognizing that prolonged lockdowns detrimentally impact both the socioeconomic resilience and health of communities, governments should implement temporary lockdowns while developing sustainable strategies to effectively reduce community transmission.

ii. Governments should establish comprehensive plans and frameworks to proactively address mental and psychological health during future lockdowns. It is crucial to enhance the population's literacy on mental, psychological, and physical health to mitigate adverse effects.

iii. At all levels (local, state, and federal), governments should ensure adequate support and palliative care for citizens affected by lockdowns. Insufficient income during lockdown periods can lead to heightened anxiety, stress, and depression among individuals.

iv. Prioritizing the enhancement and modernization of healthcare facilities, as well as the training of frontline workers, is essential not only during pandemics but also for addressing major contemporary health challenges. This proactive approach will bolster the healthcare system's capacity to respond effectively to health crises.

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