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Yoga for Improving the Quality of Life in Cervical Cancer During COVID-19: A Narrative Review

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Abstract: Consistently high incidence and fatality rates make cervical cancer (CC) the second most frequent malignancy among women globally. Multimodal therapy for cervical cancer results in severe side effects that negatively impact patients' quality of life. One major issue during the COVID-19 period was the scarcity of available therapy options. In this review, we looked at how yoga may boost health and well-being in cervical cancer patients during COVID-19.

The literature study made extensive use of online databases. Using the predetermined selection and rejection criteria, only 7 articles were chosen. COVID-19 yoga and cervical cancer research results were included. 2152 studies were found related to cervical cancer and QOL. It is found that cervical cancer and its treatment have reduced QOL, especially during COVID-19. Articles related to Yoga improving Quality of life were found and based on the selection and rejection criteria findings related to Yoga and Cervical cancer were incorporated. A greater decline in cervical cancer patients' quality of life was seen during the 19th outbreak of the COVID, according to the reviewed research. So, it's reasonable to assume that yoga may aid COVID-19 era cervical cancer patients by enhancing their overall quality of life.

Keywords: Cervical cancer, COVID-19, Therapy, Yoga, Health

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Introduction

Cancer is a dreadful kind of disease. The typical method of treatment for cancer is used in order to improve the patient's quality of life. This is done because conventional therapies have the ability to

alleviate the symptoms of the disease to a greater extent when they are combined with alternative or complementary treatments. There are many different elements that contribute to the

development of cancer. Changes in one's lifestyle have the potential to be recognised as one of the most important factors in the development of cancer; among these factors, smoking, inactivity, poor eating habits, and excessive drinking are considered to a greater degree. In addition, having a high body mass index is one of the risk factors associated with cancer (Vergnaud *et al.*, 2013; Thomson *et al.*, 2014; Thomson *et al.*, 2014).

There are several subtypes of cancer to choose from. With an expected total of 570 000 new cases in 2018, representing 6.6% of all female malignancies, cervical cancer ranks as the fourth most frequent kind of cancer detected in women. Roughly nine in ten deaths caused by cervical cancer happened in low- and middle-income countries. It is considered to be one of the leading factors in the mortality rate of women (Momenimovahed and Salehiniya, 2017; Kovachev, 2020).

There are many things that can put a person at risk for developing cervical cancer, such as smoking, using oral contraceptives, having a weakened immune system (which makes them more likely to have persistent HPV infections and a more rapid progression to pre-cancer and cancer), the burden of cervical HPV infection and other HPV-related cancers, co-infection with other sexually transmitted agents, sexual behaviour, the percentage of 15-year-olds (men and women) who have had sexual intercourse, and the Getting vaccinated against HPV significantly reduces one's likelihood of acquiring cervical cancer (Momenimovahed and Salehiniya, 2017; Kovachev, 2020).

The diagnosis of cervical cancer itself places a significant burden on the mental health of the patient, resulting in a diminished quality of life. Surgical procedures, radiation therapy, and chemotherapy are the main forms of treatment for people diagnosed with cervical cancer (Morris *et al.*, 1999; Peters *et al.*, 2000). The patient's quality of life is greatly hindered not only by the disease itself but also by the techniques of

treatment that are provided and the adverse effects that are caused by the drug, such as constipation, vomiting, tiredness, decreased appetite, and disturbed sleep. It is possible for the patient's quality of life to be diminished as a result of less physical activity, impaired emotional functioning, and overall diminished cognitive ability (Andersen *et al.*, 1989; Bruner *et al.*, 1993).

Wuhan, in the Chinese province of Hubei, was the site of a severe acute respiratory syndrome coronavirus 2 outbreak in January 2020. (Wu *et al.*, 2020; Zhou *et al.*, 2020). The number of infected people has reached 4,806,299 as of May 2020. It caused the deaths of 318,599 people.

Psychological distress and symptoms of mental illness, such as excessive fear, discrimination, wrath, guilt, denial, stress, anxiety/fears, post-traumatic stress, stigmatisation, sleeplessness, and depression, are linked to epidemics of infectious diseases like COVID-19 (Jones *et al.*, 2017; Bao *et al.*, 2020). These variables raise the probability that the patient would have acute complications or worsening of their preexisting chronic condition (Torales *et al.*, 2020).

COVID-19 has major and far-reaching consequences for society. Particularly in oncology, the influx of patients was beginning to test the staff's abilities. The severity of the disease necessitated limiting the care given to patients with cervical cancer in an effort to prevent the spread of infection, but this limited care has had a significant effect on the patients' quality of life (Dewan *et al.*, 2021).

Because of its positive effects on both mind and body, yoga is increasingly being used as a complementary therapy to help improve patients' quality of life. People's mental and emotional states are profoundly impacted by it. For which there is an exceptionally high level of familiarity in the public and the medical literature (Sulenes *et al.*, 2015; Cancer Statistics, 2016; Siegel, 2016). The purpose of this study was to compile data on

the link between yoga and quality of life in cervical cancer and COVID 19.

Materials and Methods

We examined MEDLINE/PubMed, EMBASE, and Google Scholar for research articles. We used Keywords like cervix cancer, cervical cancer, cervix neoplasm, cervical neoplasm, Quality of life, Yoga and COVID 19. For a broader range of search, we also used the following terms: psychological, depression, anxiety, radiotherapy/adverse effects, well-being, and social well-being. Full text copies of all studies of possible relevance were obtained. We also manually searched the reference lists of all reviewed papers.

For inclusion in this review, the papers which contain the literature regarding: (1) studies of QOL, psychological, or social well-being in patients with histologically verified CC, treated with radiotherapy and chemotherapy ; or studies of mixed samples of patients with gynaecological cancer in which the subgroup of CC could be identified; papers related to cancer and yoga; papers related to QOL and cervical cancer and COVID 19; papers related to cervical carcinoma and yoga and covid and yoga were selected. Papers published in English were only taken for the study.

Results and Discussion

Nearly 225 articles were identified after an electronic search for Yoga and COVID-19, and another 32 articles were located after searching for Yoga, COVID-19, and quality of life. Combining Yoga with COVID-19 and Cancer yielded 15 search results. Yoga, COVID-19, and quality of life in cancer patients: only 6 outcomes were discovered. Yoga's effect on COVID-19 or the relationship between Yoga and cervical cancer survival rates or quality of life was not identified. Based on the admission and exclusion criteria, only 7 of these (Table 1) were ultimately accepted. Results from the Cervical Cancer and Yoga International Dialogues 19 (COVID-19) were integrated.

Yoga an ancient philosophy has many psychological benefits it is considered as a medicine for both mind and body. Yoga has also been practiced spiritually and recently the health benefits of yoga have enlightened the general population which has motivated them to follow it on a regular basis(Agarwal and Maroko-Afek, 2018).Yoga is also used in the modern era for treating chronic diseases and associated comorbid conditions both physical and psychological, thereby enhancing the QOL of the patients (Rao *et al.*, 2017).

After referring to the review of the literature, a study by Kulkarni *et al.* (2021) found that yoga practice on a regular basis is beneficial for people during COVID 19. Komal Shah *et al.* (2022) in their study has stated that -- With its capacity to boost cell-mediated immunity, yoga might serve as a useful preventative strategy against COVID-19, a virus in which immunity plays a key role.

Studies by Mallaiah *et al.* (2022), Micheletti *et al.* (2022), Upadhyay *et al.* (2022), Lundt and Jentschke (2019) concludes that Yoga helps in reducing physical and mental disorders like stress, anxiety, depression as well as in reducing inflammation in the patients.

Sudarshan Kriya Yoga (SKY) is a distinct yogic practise that includes specific sequential breathing techniques that balance the autonomic nervous system, alleviate anxiety, routine stress, depression, stress-related medical disorders, and posttraumatic stress, and boost natural host immune responses (Zope *et al.*, 2021).

Although in-person yoga sessions are optimal, Snyder *et al.* (2021) suggested that remote practises may be just as helpful. Dalpati *et al.* (2022) found that integrating yogic practises and other self-improvement routines into students' academic curriculum and daily practises in co-curricular activities or proficiency programmes could help the next generation cope with everyday challenges and stresses like lockdowns and pandemics and succeed in their personal and professional lives. Umesh *et al.* (2021) concluded

Table 1: Studies on Yoga and COVID 19

S. No.	Author	Study design	Sample size	Methodology	Result	Conclusion
1.	Shah <i>et al.</i> (2022)	Scoping review	NA	An extensive electronic search was done using keywords and found relevant articles.	Yoga enhances life quality and physical suffering. Yoga decreases markers of inflammation, recombinant receptor expression, and BDNF signalling, according to research.	For infectious diseases like COVID-19, where immunology plays a key role, yoga may prove to be a useful preventative tool due to its propensity to boost cell-mediated immunity.
2.	Mallaiah <i>et al.</i> (2022)	Retrospective study	NA	Yoga therapy (YT) patients at a big cancer center's Integrative Medicine Center between March 1, 2020 and October 30, 2021 will be studied retrospectively.	YT dramatically decreased physical, global, and psychological suffering.	YT dramatically decreased physical, global, and psychological suffering.
3.	<u>Micheletti</u> <i>et al.</i> (2022)	This is a randomized, non-pharmacological, interventional, prospective study.	n=24	24 patients were selected and randomized to yoga group (n=12) and control group (n=12) and cortisol levels were analysed after intervention.	After XRT, YG had lower cortisol levels than CG due to yoga practise.	According to the results of this research, regular yoga practice has the potential to alleviate stress and lower inflammatory responses.

4.	Sharma <i>et al.</i> (2022)	RCT		The Hospital Anxiety and Depression Scale, Generalized Anxiety Disorder-7 Item, Patient Health Questionnaire-9, and Perceived Stress Scale were administered to all individuals before and during quarantine in equal numbers.	Patients' levels of stress, anxiety, and depression dropped significantly when the yoga supplement was introduced.	Patients with COVID-19 may benefit from an intervention using yoga in order to lower their levels of stress, anxiety, and sadness.
5.	Snyder <i>et al.</i> (2021)	RCT	NA	Two yoga practitioners led sessions with patient-caregiver dyads from ongoing yoga trials. We summarised their perspectives using yoga class recordings and interventionists' comments on their growth.	Overall approval was high among patients, carers, and instructors despite difficulties in the areas of technology, location, setting, teaching, and personal connection.	Both the research participants and the interventionists preferred face-to-face meetings, although they were open to using videoconferencing technology instead.
6.	Upadhyay <i>et al.</i> (2022)	Matched control study	N= 8519	At the beginning, six weeks, and twelve weeks, participants will be asked to fill out a series of online questionnaires. Validated scales and objective questions on past COVID-19 infection and health status may be found in these surveys. Stress, mood, resilience, and general health may all be gauged with the use of the validated questionnaires.	At every time point, the yoga group had a lower median score on the Perceived Stress Scale (PSS) than the active and placebo groups.	Even throughout the pandemic, yoga practitioners reported lower stress, worry, and melancholy and more wellbeing and enjoyment than active and placebo comparators.
7.	Lundt <i>et al.</i> (2019)	RCT	n=58	An observational design based on a randomised controlled trial investigated anxiety, melancholy, and exhaustion in cancer patients with various illnesses 6 months after yoga therapy.	At follow-up, anxiety and tiredness symptoms increased but depression symptoms remained stable.	The findings are encouraging and lend credence to the idea that yoga therapies might be useful in cancer care.

that systematic clinical trials need to be conducted to investigate the supplementary efficacy of Yoga and Ayurveda lifestyle interventions with current conventional treatment approaches. Shukla *et al.* (2020) showed that AVP lowers RPE (Rating Perceived Exertion) maximally during breath-holding, while DPE increases BHT more. Günebakan and Acar (2022) suggests that tele-yoga training may be a safe and effective method for alleviating these issues.

Based on the literature yoga helped in improving mental health condition of the patient, it also helps in strengthening the immune and respiratory systems which are the main components in quality of life. As we have seen that the QOL in cervical cancer patients during covid 19 is hampered because of their irregular treatment schedules. This leads to disease progression affecting the emotional function and sleep quality which leads to decreased quality of life (Dewan *et al.*, 2021). So yoga helps in managing emotional status which further improves sleep quality and finally enhancing the QOL.

Conclusion

It can be concluded that QOL can be improved by yoga if it is implemented in our routine. Therefore, yoga has the potential to be used as a technique for the purpose of enhancing the quality of life of cervical cancer patients throughout the course of COVID 19.

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