Original Article

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Comparative Analysis of Health and Sociodemographic Status of Working and Non-Working Women and Their Children

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ABSTRACT

Women have responsibilities of home management and raising children, and in recent times, they have been engaged themselves professionally. **Objectives:** To compare insights into working and non-working women's mental and physical health. **Methods:** The study was conducted to perform a retrospective and comparative analysis of the sociodemographic status and health of working along with non-working women, as well as their kids. The study included both working and non-working mothers aged 25 to 45 who had their independent incomes. Their children were between 2 and 18 years old. The health factors being studied were bone density, body mass index, haemoglobin, calcium levels, and socioeconomic status (based on Kuppuswamy's scale). Data were analyzed by SPSS version 25.0. **Results:** The bone scan results of working and nonworking women differ significantly (p-value=0.033), indicating that working women had a little higher prevalence of osteopenia and hypocalcemia than nonworking women. However, the haemoglobin, body mass index, and socioeconomic status levels of both groups and their kids do not differ significantly. **Conclusions:** It was concluded that the comparison was made from the health outcomes of non-working and working women. Although some divergence and convergence were present, there is not much of a difference between health and sociodemographic characteristics.

INTRODUCTION

In the present era, women are more inclined towards achieving their goals and doing jobs owing to changes in the cultural norms and growing trends of women empowerment. As a consequence, several concerns have been raised regarding the potential impact of employment on the physical and mental health of working women and their children [1]. Traditionally, women have always been considered the family's primary caregivers, required to serve their children and spend their time in housekeeping. Nevertheless, these traditional norms and expectations from women have now undergone significant modifications [2]. As per the International Labor Organization (ILO) in 2000, the percentage of women in the worldwide labour force was 51.8%. However, in 2020, a notable increase was observed in women's engagement in paid occupations, demonstrating 56.2% of women

315

Akram SJ et al.,

engaged in jobs [3, 4]. As working women must manage their work-life balance, it is crucial to provide insights into their physical and mental health. Several studies have been involved in investigating the impact of employment on their health, and both negative and positive outcomes have been suggested so far. For instance, Shekhawat *et al.,* demonstrated that financially independent women had better mental health as compared to those who were not employed [5]. On the other hand, some studies suggest that this financial independence comes with significant limitations like family conflicts, increased stress, and inefficiency in maintaining a healthy work-life balance [6, 7]. Moreover, research suggests that children of working women may also be subjected to both benefits and difficulties. For instance, augmented cognitive development, better social skills, and higher educational outcomes are reported in such children [8–10]. However, dependence on substitute caretakers, decreased parental care, and potential health effects are some of the difficulties that children with working women face [11-13]. This study aims to evaluate and analyze the health outcomes of both working and non-working women, shedding light on the unique challenges and advantages each group may face. Their children were also monitored to provide insights into the potential effects on their overall well-being. The research aims to contribute to the existing body of knowledge by considering both the mental and physical impacts of employment on working and non-working women and their children. This study's findings can help educate medical professionals, employers, and policymakers regarding the opportunities and challenges related to women's employment. Thus, by using these results, specific programs and policies may be developed to improve the overall well-being of jobless and working women, resulting in a healthy society.

METHODS

From March to May 2018, a cross-sectional study was conducted at Badami Bagh, Lahore, with 200 mothers aged 25 to 45. Sample size of approximately was calculated by n=2×(Zα/2+Zβ)2×σ2/Δ², significance Level (α\alphaα): 0.05 (Z=1.96), power (1–β1-\beta1−β): 80% (Z=0.84), expected Effect Size (Δ): Based on prior data or pilot study and Variance (σ2): The total number of participants was n=200. Half of the participants were employed, and the other half were not. All participants had children aged 2 to 18 and earned independent incomes apart from their husbands, who were also employed. Demographic data, such as education, occupation, marital status, and number of children, were collected. Socioeconomic status was measured using Kuppuswamy's scale, which considers income, housing, transportation, and education. Informed consent was taken. The study excluded male, and women

outside the 25–45 age range, those without children, children under 2 or over 18, and women without independent incomes [14], the Pediatric Symptom Checklist (PSC-17) for children was used in this study [15]. Physical health was evaluated using haemoglobin levels, BMI, height-weight charts, blood calcium levels, bone density (via DEXA scans), and socioeconomic factors. Data were entered and analyzed by SPSS 25.0. All the quantitative variables were presented by Mean + SD and Qualitative with frequency and percentages. Association of study groups (Working and Non-working women) with socioeconomic status, bone density, Body Mass Index (BMI), anemia, serum calcium levels, and pediatric symptoms checklist were observed by Chi-square test, p-value<0.05 was considered as significant.

RESULTS

The demographic information revealed that 16% worked between 30 and 40 hours of effort, 84% worked 41 to 50 hours a week; 50.5% of them were between the ages of 25 and 31; the remaining women were between the ages of 32 and 45; all of them were married; 82.5% of them lived with their husbands, while the remaining women were either widowed, separated, or divorced; 45% of them lived with family members, while the remaining women rented a home; 10% of them were the family's breadwinners, whereas 44% of their husbands did the same, and 39% of the women received government funding to meet their basic needs. On the other hand, the remaining ladies had access to a variety of additional healthcare facilities. 10% of women had completed high school and obtained a General Education Diploma (GED), 12% finished grade 12 or below, and 22.5% had received a doctorate or doctorate. 40% were earning between $10,000 and $49,000 annually, 40% between $50,000 and $99,999 annually, and 20% between $100,000 and $149,999 annually. Among the children half of them were male and half were female. The children's ages ranged from 2 to 9 for 50.5% of them, and from 10 to 18 for 45.5%, Table 1.

Table 1: Scio-Demographic Characteristics of study participants

Variables	Frequency (%)
Employment Status	
Working Women	100 (50.0)
Non-Working Women	100 (50.0)
Total	200 (100)
Working Hours per Week	
30–40	16 (16)
41–50	84 (84)
Total	100 (100)
Age Range (years)	
25–31	101 (50.5)
32–38	39 (19.5)

39-45	60 (30)
Total	200 (100)
Marital Status	
Separated	12 (6)
Divorced	11 (5.5)
Widowed	12 (6)
Living with Husband	165 (82.5)
Unmarried	0 (0)
Total	200 (100)
Parity	
1-2	133 (66.5)
3-5	67 (33.5)
Total	200 (100)
Children Age Range (Years)	
2-9	107 (53.5)
10-18	93 (46.5)
Total	200 (100)
Residence	
Owned	53 (26.5)
Rented	57 (28.5)
Joint Family	90 (45)
Total	200 (100)
Breadwinner of Family	
Self	21 (10.5)
Husband	88 (44)
Both	77 (38.5)
Extended Family	14 (7)
Total	200 (100)
Pay for Healthcare	
Government funding	78 (39)
Heath Insurance	47 (23.5)
Self-Pay	75 (37.5)
Total	200 (100)
Educational Status	
12 Grade or less	24 (12)
High School Graduate or GED	20 (10)
Some College/Technical School Training	41 (20.5)
College Graduate (BA, BS)	70 (35)
MD, PhD	45 (22.5)
Total	200 (100)
Total Family Income	
10,000 to 49,999	80 (400)
50,000 to 99,999	80 (40)
100,000 to 149,999	40 (20)
Total	200 (100)

The socioeconomic status of both working and non-working women was categorized using the modified Kuppuswamy scale. There was no significant association of socioeconomic status with women's working status. The result illustrates the socioeconomic condition of women graphically (Figure 1).
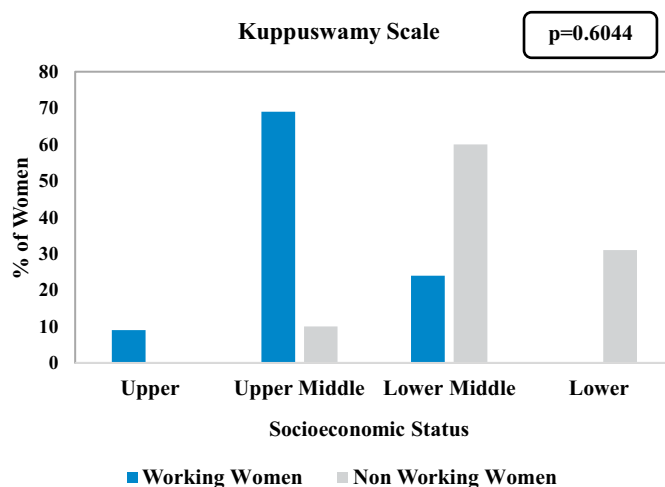

Figure 1: Socioeconomic Status of Working and Nonworking Women

According to the data, 45% of working women had normal bone density, 22% had severe osteopenia and 11% had mild osteopenia. Out of the women who did not work, 55% had average bone density, whereas 27% had severe osteopenia, 9% had moderate or mild osteopenia, and 9% had neither. Significant variations exist between the bone density distributions of the two groups (p-value=0.033). Among women who did not work (27% vs 22%), the prevalence of serious osteopenia, which indicates a significant decrease in bone density, was significantly higher and results are shown in Figure 2.
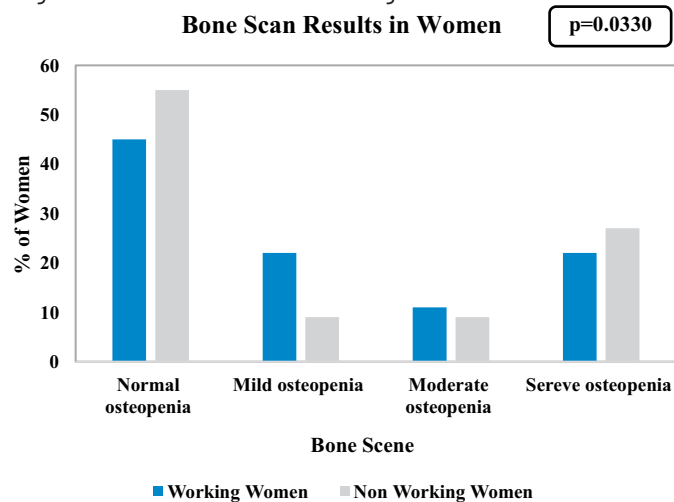

Figure 2: Bone Scan Analysis of Working and Non-Working Women

The findings showed that 45% of working women had a normal BMI, 11% were borderline, and 44% were overweight. Nonetheless, just 9% of the unemployed women were overweight, while 18% were underweight. There were 55% with a normal BMI and 18% with a borderline BMI. There was no appreciable variation in BMI between the groups in the study (p-value=0.25). Compared to non-working women, a higher percentage of working

Akram SJ *et al.,*

women (44% vs. 9%) were categorized as overweight. Additionally, employed women had a lower rate of underweight individuals than non-employed women (0% vs. 18%). However, the rate of women with a normal BMI was similar in both groups (45% of working women and 55% of non-working women). The findings showed that 67% of working women had normal haemoglobin levels and 33% were anemic. 71% of the unemployed women had normal haemoglobin levels, while 29% were anemic. The results showed that working women had slightly higher rates of anemia (33% vs. 29%) than non-working women. However, most working and non-working women (67% and 71%, respectively) had normal haemoglobin levels. however, there was no association between the group's haemoglobin levels. According to the findings, 44% of working women had normal blood calcium levels, whereas 56% had hypocalcemia. 71% of unemployed women had normal blood calcium levels, whereas 29% had hypocalcemia. The results showed that hypocalcemia is slightly more common in working women than in non-working women (56% vs. 29%) and p-value=0.6772). Interestingly, the serum calcium levels of many working and nonworking women groups were normal (44% and 71%, respectively). The incidence of hypocalcemia among working and non-working women is shown in Table 2.

Table 2: Different Parameters among Working and Non-Working Women

Type of Women	BMI				p-value
	Normal	Borderline	Overweight	Underweight	
Working Women	45%	11%	44%	0%	0.2516
Non-Working Women	55%	18%	9%	18%	
	Anemia status				
	Anemia		Normal		
Working Women	33%		67%		0.0668
Non-Working Women	29%		71%		
	Serum Calcium				
	Normal		Hypocalcemia		
Working Women	44%		56%		0.6772
Non-Working Women	71%		29%		

The study displays the distribution of pediatric symptom ratings between children of working and nonworking women. The results showed that 9% of children of working moms had scores above 14, indicating an increased likelihood of pediatric issues. However, 91% of the kids scored lower than 14, suggesting that pediatric symptoms are less common. 75% of children of non-working women had test results below 14, while 25% had results exceeding 14 (p-value=0.151). Fewer children (9%) earned scores

indicating a higher chance of experiencing pediatric symptoms than children of non-working women (25%). A somewhat higher proportion of children from working moms (99%) had scores below the threshold than children of non-working women (75%), suggesting a lower frequency of pediatric symptoms. Just 18% of working women's children were classed as underweight, while 82% of their children had a normal BMI. In contrast, 67% of the children of non-working mothers had BMIs within the normal range, and 33% of them were underweight (p-value=0.189) Compared to children of non-working mothers, children of working women were more likely to have BMIs within the normal range (82% vs. 67%, respectively). On the other hand, children of non-working mothers were more likely than those of working women to be classed as underweight (33% vs. 18%), as shown in Table 3.

Table 3: Pediatric Symptoms and BMI Type of Working Women Children and Non-Working Women Children

Pediatric Symptoms Checklist	PSC>14	PSC>14	p-value
Working Women Children	9%	91%	0.1514
Non-Working Women Children	14%	75%	
BMI Type	Normal	Underweight	
Working Women Children	82%	18%	0.189
Non-Working Women Children	67%	33%	

The results showed that while 91% of children of non-working mothers had normal hemoglobin levels and 9% had anemia, 85% of children of working women had normal hemoglobin levels, and 15% were anemic (p-value=0.0502), indicating no significant difference in the hemoglobin levels of the groups under study. The distribution of hemoglobin levels in children was illustrated in Figure 3.
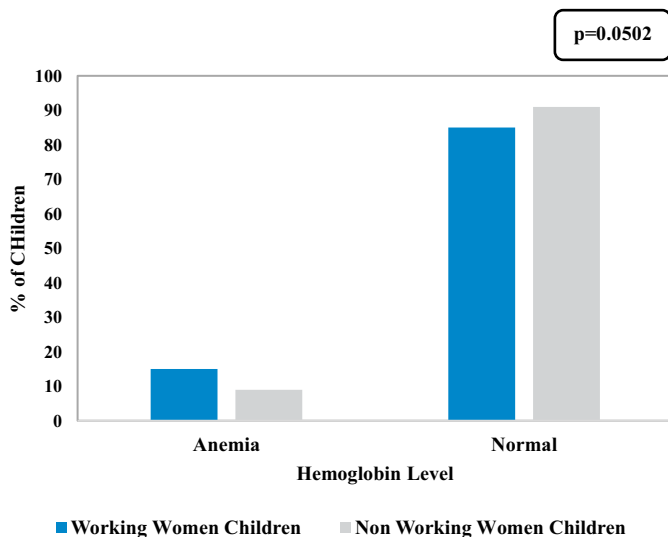

Figure 3: Hemoglobin of Children Among Working and Non-Working Women

Compared to 36% of children of non-working women, the

Akram SJ et al.,

results indicate that children of working women had a lower incidence of dropout. There is no discrete difference between the groups' rates of school desertion (p-value=0.2905). Children of working women had a lower percentage of school dropouts than children of non-working women. In particular, children of working women had a much lower dropout rate than children of non-working women, with 36% of the former leaving school earlier. Comparisons of rates of school dropouts for children of working and non-working women were made in Figure 4.
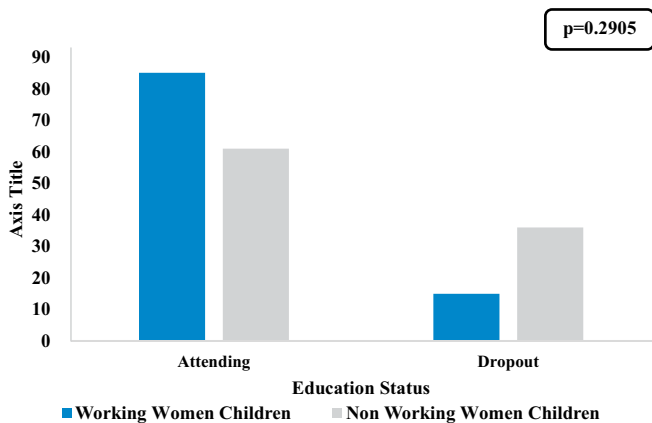

Figure 4: Children Dropout Rate of Working and Non-Working Women

DISCUSSION

Analysis revealed that jobless women had more severe osteopenia in terms of bone density as compared to working women. These findings are not from the previous study, which reported poorer bone health in working women because of their strict lifestyle [16]. However, personal characteristics such as hormone levels, genetic makeup, and age must also be investigated, as these variables can also affect women's bone density. It was found that working women were more prone to obesity as compared to jobless women. The unemployed women had higher weight and obesity rates due to minimum physical activity and sedentary lifestyles [17]. The findings of the present study highlight the necessity of focused measures such as access to healthcare services and nutritional support to alleviate anemia among working women. The study also examined another aspect of the lives of children of both working and non-working women. Children of working women had a lower percentage of school dropouts than children of non-working women. These findings are consistent with earlier studies that exhibit that maternal employment can improve children's educational achievements by giving them access to more educational resources, financial stability, and role modelling [18, 19]. However, factors that might significantly affect school dropout rates and educational performance, like parental

engagement and socioeconomic position, must be considered. Supportive work environments must be developed where diversity is appreciated, and women are encouraged by administration and coworkers. Such flexible work arrangements may benefit working women by enabling them to manage their work life and personal responsibilities efficiently. Initiatives must also be developed to encourage self-care behaviour in women employees [20, 21]. Moreover, women should also participate in professional development programs to help them progress and take on leadership roles. Organizations must implement these suggestions to foster a positive and encouraging environment in the workplace for women that can enhance their job satisfaction, productivity, and well-being. Unemployed educated women should also consider the benefits of working from home. Teleworking allows people to work whenever they want and from home, which is highly suitable for mothers with other chores. On the other hand, programs must also be developed for proper skills-based training of unemployed women without formal education. Women can adopt these recommendations to maintain a healthy work-life balance while achieving career progression, financial freedom, and job satisfaction.

CONCLUSIONS

It was concluded that the study found no significant differences in the health and socio-demographic variables between working and non-working women and their children. However, there were some similarities and differences in certain aspects.

Authors Contribution

Conceptualization: SJA
Methodology: RZ, JA, RL, FM, SS, FL, AS, HMK
Formal analysis: SJA
Writing review and editing: SJA, RZ, JA, RL, FM, SS, FL, AS, HMK

All authors have read and agreed to the published version of the manuscript

Conflicts of Interest

The authors declare no conflict of interest.

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