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Subjective time poverty: A gendered analysis

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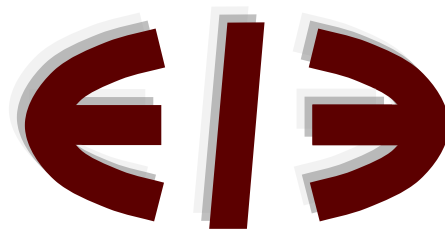
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Subjective time poverty: A gendered analysis

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SUBJECTIVE TIME POVERTY: A GENDERED ANALYSIS

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Abstract

This study aimed to assess the extent and identify the socio-economic predictors of subjective time poverty across genders, using a general population sample in Gauteng province of South Africa. Based on the composite time poverty index, 22% of men and 16.7% of women report being time poor. The proportion of men who reported time poverty was significantly higher than that of women across all domains of time (general, family and leisure). This is a surprising finding considering that studies based on objective measures of time poverty have found women to experience higher time poverty due to their disproportionate share of unpaid domestic and caregiving responsibilities. The dissonance between objective and subjective measures of time poverty indicate that social context and individual perspectives contribute to the nuanced ways in which men and women assess their time and report feelings of time poverty. Further, the study identified both similarities and dissimilarities amongst predictors of subjective time poverty across genders. While age, residing in an informal dwelling and lengthier commute times had consistent association with time poverty across both genders and all three time domains, some other covariates (income, children, elderly, and employed) were found to have differences in the association with time poverty for male and female reinforcing the complex relationship between subjective time poverty and socioeconomic factors that is shaped by gendered norms and perceptions.

Keywords: subjective time-poverty; gendered analysis; ordinal regression, general time-poverty, family time-poverty, leisure time-poverty

Conflict of interest: The authors hereby affirm that there is no conflict of interest involved in this study.

Compliance of Ethics standard statement: The study uses secondary data which was collected upon approval from the University of the Witwatersrand Human Research Ethics Committee (non-medical).

Informed Consent: The data was collected with informed consent from respondents.

SUBJECTIVE TIME POVERTY: A GENDERED ANALYSIS

Abstract

This study aimed to assess the extent and identify the socio-economic predictors of subjective time poverty across genders, using a general population sample in Gauteng province of South Africa. Based on the composite time poverty index, 22% of men and 16.7% of women report being time poor. The proportion of men who reported time poverty was significantly higher than that of women across all domains of time (general, family and leisure). This is a surprising finding considering that studies based on objective measures of time poverty have found women to experience higher time poverty due to their disproportionate share of unpaid domestic and caregiving responsibilities. The dissonance between objective and subjective measures of time poverty indicate that social context and individual perspectives contribute to the nuanced ways in which men and women assess their time and report feelings of time poverty. Further, the study identified both similarities and dissimilarities amongst predictors of subjective time poverty across genders. While age, residing in an informal dwelling and lengthier commute times had consistent association with time poverty across both genders and all three time domains, some other covariates (income, children, elderly, and employed) were found to have differences in the association with time poverty for male and female reinforcing the complex relationship between subjective time poverty and socioeconomic factors that is shaped by gendered norms and perceptions.

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1. INTRODUCTION

The limitation of traditional poverty measures, that rely only on monetary metrics like income and expenditure, to fully recognise deprivation has been recognised and accepted for some time now (Wagle 2009; Bourguignon & Chakravarty 2003). This has led to the emergence of a myriad of multidimensional poverty measures, in order to include other (non-monetary) factors such as exclusion from education, health, basic services, freedom, opportunities etc. (Alkire et al 2015; Thorbecke 2013). Despite the dynamic and multidimensional nature of these approaches, they most often fail to consider the resource aspect of time allocation (Nackerdien,

2021, Iqbal, *et al.*, 2020; Giurge *et al.*, 2020). Time poverty is relevant because it is not clear that increased income gets translated into time opulence for all (Merz & Rathjen 2014).

The issue of time poverty presents challenges as empirical evidence has established a correlation between time scarcity and diminished levels of productivity, physical health, and overall well-being (Krueger 2009; Tomczyk *et al* 2021; Whillans *et al* 2017). ‘Time is a limited resource’ alludes to the concept that when an individual devotes an imbalanced amount of time to work, they are left with little time available for rest or leisure resulting in a scarcity of time (Iqbal, *et al.* 2020; Giurge *et al.*, 2020). The adverse consequences of time poverty are frequently disregarded by individuals, organisations, and policymakers. There is hence an urgent need to understand the dynamics of time poverty, its drivers and interface with gender as well as socio-economic factors.

The study of time poverty in South Africa is particularly interesting given its apartheid legacy that has embedded structural differences not just in the form of stark socio-economic inequalities but also spatial demarcations that have potential for severe time poverty consequences. The spatial inequalities are manifested not just in terms of the distance to key economic centres but also in access to basic infrastructure. Both these act as mediating factors for time poverty. Understanding the dynamics of time poverty in South Africa is therefore important. However, given that the last time use survey in South Africa goes back to 2010, very little understanding exists on the recent trends in time poverty in the country. Further, the survey did not incorporate the subjective element of time-use and time poverty. The 2023 GCRO survey incorporated pertinent questions on subjective time poverty presenting a unique opportunity to assess the prevalence of subjective time poverty and explore its drivers amongst the general population.

The bulk of time poverty literature has been objective assessments based on time-use survey, therefore this study contributes to the larger literature on time poverty by presenting a subjective assessment of time poverty. Subjective assessment of poverty is increasingly being recognised even within the context of income-based poverty measures (Buttler 2013), which has led to the acknowledgement that while absolute income is relevant for an objective poverty measure, relative income is also an important factor when it comes to subjective (income-based) poverty assessment. However, very little is known about subjective assessment of time poverty based on an individuals' perceptions and experiences of time scarcity, which may not be fully reflected in traditional objective measures. Additionally, the impact on individual wellbeing is driven by the social context and cultural setting of the individual that is measured by a subjective assessment. Therefore, subjective time poverty measures complement objective

measures by offering insights into individuals' feelings, experiences, and perceptions of time scarcity. This information is valuable for designing effective interventions, policies, and support systems to address the challenges associated with time poverty and enhance overall well-being.

The objective of this study is to comprehensively examine the phenomenon and extent of subjective time poverty, particularly amongst men and women in Gauteng, South Africa, with a focus on the interplay between work and family obligations. The research also seeks to investigate how socioeconomic factors and spatial variations contribute to these disparities in time poverty. More specifically the study is guided by the following research questions:

1. What is the extent of subjective time poverty amongst the general population in Gauteng province?
2. Does subjective time poverty differ between the men and women in the province?
3. What are the socio-economic determinants of subjective time poverty across genders?

2. LITERATURE REVIEW

The term "time poverty" was coined by Vickery (1977) to characterise the predicament faced by families in the United States who are unable to achieve a fundamental level of well-being due to their extensive work hours, resulting in a scarcity of leisure time. Numerous researchers, including Newman (2002) and Apps and Rees (2004), have explored the correlation between an individual's working hours and their experience of time poverty. These studies revealed that an individual's well-being is influenced not only by income and spending habits, but also by other significant factors like time distribution including for household work and caregiving within households (Walker 1973). This significantly broadens the parameters from conventional national poverty level assessments, where the significant contributions of household work that are essential for the overall functioning of families are neglected. This also facilitates a deeper discussion on gender dimensions as in conventional domestic environments, it is customary for women and female children to bear the brunt of household duties (Wade, 2004).

It is clear from literature that particularly in developing countries, women in households are unable to increase their supply of paid labour given the time constraints due to limited access to basic infrastructure and social services (Bardasi and Wodon, 2006). Due to their

increased family obligations, most studies suggest that women face time poverty more than men. The 1995 Human Development Report assessed women globally and their economic contribution using time-use statistics from 31 nations. The key finding of this report was that women carry out a greater proportion work than men, regardless of country development, when accounting for paid and unpaid labour. Much of this vital activity, which is critical to human well-being, is unpaid and not included in national economic calculations. The report concluded that "women's contributions are underestimated and overlooked. This has repercussions on women's standing in society, their opportunities in public spheres, and the gender-blindness of development policies" (UNDP, 1995).

The findings from South African studies are no different. The initial two studies conducted by Statistics South Africa (StatsSA 2001 and StatsSA 2013) found that women often face higher levels of time poverty due to their increased involvement in unpaid work tasks. The 2001 StatsSA study revealed that men allocated more of their day to paid work in comparison to women, who were more heavily involved in household upkeep and caring for household members. This gender disparity could be attributed to men being more engaged in remunerated production, while women were predominantly occupied with unpaid production. This gender gap maintained despite controlling for age, race, employment, and income.

Using the same StatsSA data, Abdurrahman (2010) found that women contributed approximately twice as much as men in non-market production relative to the South African economy. As a consequence, women had 30-40% less time available for leisure and personal care compared to men within households. Skinner (2005) stressed that helping women in household duties can lead to time savings that can be redirected towards other productive and compensated work. This has the potential to yield societal benefits, including increased opportunities for women's growth and a reduction in poverty levels.

Furthermore, gender is also found to intersect with socio-economic class to determine the outcome on time-use. Lower income and bigger size of household increased women's household work. In contrast, higher-income women can reduce time allocation for unpaid household work through hired domestic help, yet they are still typically tasked with overseeing household responsibilities. In instances where women were unemployed, their involvement in household work was notably higher compared to both employed and

economically inactive women (StatsSA 2013). These findings however come with the caveat that women in the lower socioeconomic classes tend to earn low wages and often carry the additional burden of household responsibilities, Majid's (2018).

Research on time poverty has mostly focused on objective evaluations and there is a considerable dearth of studies that address the subjective aspect. Furthermore, in the South African context, the most recent comprehensive time poverty analysis (also objective) dates back to 2010, and subsequent data collection efforts have been notably lacking. Therefore, this study seeks to contribute to literature by exploring the extent of subjective time poverty in a 2020/21 general population sample survey in South Africa.

3. DATA & DESCRIPTIVE STATISTICS

The paper used secondary data from wave 6 of the Quality-of-Life Survey (QoLS) conducted in 2020/21 by the Gauteng City-Region Observatory (GCRO) in partnership with University of Witwatersrand, University of Johannesburg and the Gauteng Provincial Government. The GCRO Quality of Life (*QoL*) survey, started in 2009, is a biennial general population survey conducted in the most populous province of South Africa, Gauteng measuring both material living conditions and subjective assessment of the quality of life, wellbeing, socio-economic circumstances, attitudes to service delivery etc (De Kadt et al., 2021).

The sixth wave, with a sample of 13 616 individuals representative of the general population, for the first time included three questions on subjective assessment of time poverty (Are you satisfied with the amount of time you have to do the things that you want to? How satisfied or dissatisfied are you with the time you spend with your family and the things you do with them? How satisfied are you with the way you spend your leisure time - recreation, relaxation etc.?). Each of these questions were measured using a 5-point Likert scale, where 1 – *Very satisfied*, 2 – *Satisfied*, 3 – *Neither satisfied nor dissatisfied*, 4 – *Dissatisfied*, 5 – *Very dissatisfied*. For the purpose of the study, subjective poverty is assumed for respondents who report to be either *dissatisfied* or *very dissatisfied*. Aside from considering the individual elements of time poverty (general time poverty, family time poverty and leisure time poverty), the study combines the three to derive a composite measure of time poverty by summing the scores of these three questions. In the total score ranging from 3 to 15, participants were considered to be severely time poor if they had total scores greater than 12 and not time poor if the total scores were less than 10. However,

participants with a total score between 10 and 12 (both inclusive) were considered to be moderately time poor. The derived time poverty composite index was ordinal with the following ordered categories (1 – not time poor, 2- moderately time poor and 3 – severely time poor). Other variables included in the analysis are age, sex, education, income levels, unemployed, dwelling (informal), commute time, children (under 18 years) and elderly (over 60 years).

Based on the composite time poverty index, 19.1 percent of the sample reported being time poor (severely or moderately), with 22% of men and 16.7% of women reporting being moderately or severely time poor (Table 1). The proportion of men who reported time poverty was significantly higher than that of women across all domains of time (general, family and leisure). The gender difference is starkest for family time poverty, followed by general time poverty. These findings point out not only the extent of subjective time poverty but also the existence of gender-related differences in how individuals perceive and experience time constraints in their daily lives. The higher levels of subjective time poverty reported by men contradicts the findings based on objective measures of time poverty where women have been found to be more time poor compared to men (StatsSA 2001 and StatsSA 2013).

Significant gender differences are noted for education and employment status with the proportion of women with below tertiary education and who were unemployed being significantly higher than for men (Table 1). Concerning the distribution of income among men and women in Gauteng, the proportion of women earning between R801 and R3, 200 was significantly higher than for men. On the other hand, the proportion of men earning incomes in the ranges; R3, 201 and R12, 800, R12,801 - R25, 600 and more than R51, 201 was significantly higher than that of women.

Table 1: Summary Statistics

Variable	Category	Full sample	Men	Women	t-test (Men-Women)	p-value
Time poverty	Index	0.191	0.220	0.167	7.99	<0.01
(moderate and severe)	Overall	0.286	0.299	0.274	3.38	<0.01
	Family	0.194	0.234	0.159	11.0	<0.01
	Leisure	0.187	0.194	0.181	1.92	<0.09
Education	Tertiary	0.258	0.273	0.245	3.70	< 0.01
Income levels	R1 - R800	0.162	0.165	0.159	0.16	0.87
	R801 - R3 200	0.363	0.319	0.402	-8.64	< 0.01
	R3 201 - R12 800	0.277	0.295	0.261	2.90	< 0.01
	R12 801 - R25 600	0.095	0.106	0.081	3.19	< 0.01
	R25 601 - R51 200	0.065	0.069	0.065	0.67	0.50
	R51 201 and more	0.036	0.046	0.028	4.29	< 0.01
Unemployed	Yes	0.313	0.265	0.353	-11.47	< 0.01
Dwelling type	Informal	0.154	0.162	0.143	3.05	<0.01
Children (under 18)	No children	0.449	0.582	0.332	29.21	<0.01
	One child	0.187	0.149	0.218	-10.29	<0.01
	Two children	0.186	0.143	0.222	-11.85	<0.01
	Three children	0.10	0.074	0.121	-9.12	<0.01
	Four and more children	0.078	0.049	0.104	-11.76	<0.01
Elderly (60 and above)	No elders	0.717	0.0744	0.692	6.66	<0.01
	One elder	0.204	0.170	0.233	-9.15	<0.01
	Two elders	0.076	0.082	0.069	2.79	<0.01
	Three elders	0.002	0.002	0.003	-0.79	0.428
	Four and more elders	0.001	0.001	0.001	-0.34	0.734
Commute time	0-15 minutes	0.382	0.357	0.386	-3.46	<0.01
	16-30 minutes	0.363	0.342	0.364	-2.70	<0.01
	31-45 minutes	0.122	0.134	0.011	4.98	<0.01
	46-60 minutes	0.078	0.085	0.068	3.77	<0.01
	61-75 minutes	0.010	0.010	0.010	0.0	0.99
	75-90 minutes	0.019	0.029	0.010	0.0	0.99
	More than 90 minutes	0.02	0.022	0.015	3.13	<0.01
Observations		13,616	6,340	7,276		

Data also indicates that the proportion of women living in the formal dwellings was significantly higher than for their male counterparts. This suggests that women are more likely to have access to and live in housing arrangements that are considered "formal," which may include homes in planned neighbourhoods or areas with established infrastructure. The study also investigated the differences in the commute times between men and women living in Gauteng. The results revealed that men tend to have longer travel times to their destinations in comparison to women. This finding supports the fact that a larger proportion of women reside in formal dwellings, which are often situated nearer to essential amenities and centres of economic activity. Conversely, a higher proportion of men are situated in informal settlements which necessitate longer commute times to reach their destinations. Furthermore, the results showed that higher proportion of women had significantly higher family obligations, characterised by living with children and elders in the household, as compared to men. This is in line with well-established societal norms and expectations, where women often shoulder a greater share of caregiving duties, including childcare and eldercare.

Positive skewness is observed in the time poverty score distribution (ranging 3-15) for both men and women, suggesting that most respondents were satisfied with how they allocated their time (Fig 1 left panel). It is noteworthy that a smaller percentage of respondents reported feeling dissatisfied and, as a result, experiencing a sense of time poverty as the distribution tapers towards the tail end of the graph. Surprisingly, Men (Mean 7.53, Median 7, Mode 6 and Skewness 0.619) reported lower mean and skewness compared to women (Mean 7.20, Median 7, Mode 6 and Skewness 0.699) indicating that the subjective time poverty is noted as higher amongst men than women. The higher standard deviation for men (2.39) compared to women (2.25) is also worth noting. This is also noticeable in the 'women' curve that shows noticeably more variation than the 'men' curve (Fig 1 left panel). The existence of multiple peaks and troughs in the 'women' curve suggests that the data contains distinct subgroups. These groups might stand for, amongst other things, women who are employed versus those who are not, and women from varying socio-economic backgrounds. The presence of multiple modes and higher variability suggest that there may be diverse experiences of women in relation to time poverty.

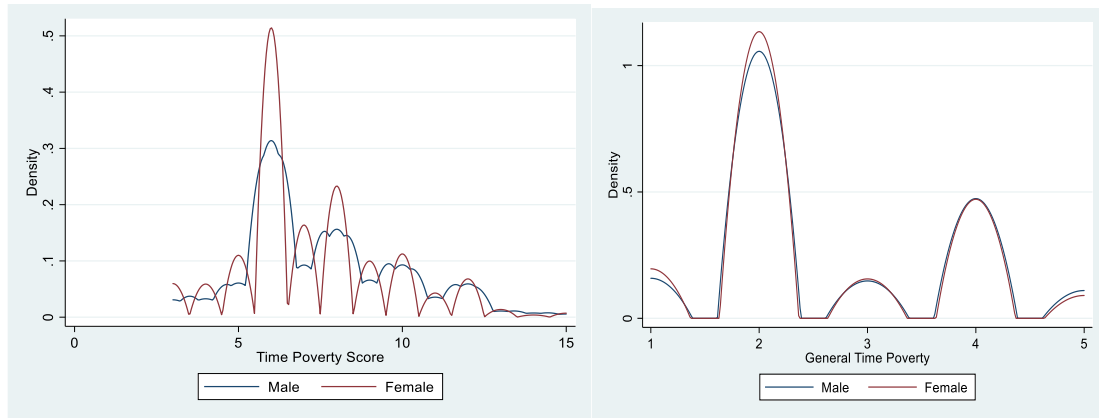


Figure 1: Kernel density plot of time poverty score and General Time Poverty

Notwithstanding the greater satisfaction reported by women the in right panel of both figures 1 and 2, we see a closer alignment of men and women indicating that gender differences reported for general time satisfaction and leisure time satisfaction are marginal.

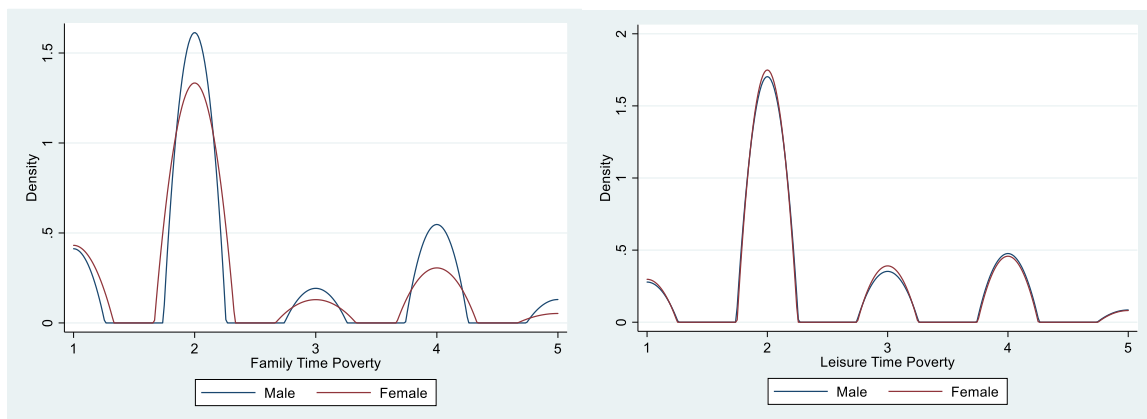


Figure 2: Kernel density estimate of Family time poverty and Leisure time poverty

However, when it comes to family time poverty, there is substantial variation observed between men and women (Fig 2 left panel). Women report less satisfaction with family time compared to men. This is ironic in the context of time use findings that women spend more time on household responsibilities and may be indicative of the quality of time versus the quantity of time spend with family (Mattingly & Bianchi 2003).

4. Multivariate Ordinal Regressions

Next, we employ multivariate ordinal regressions in order to identify the socio-economic determinants of subjective time poverty for the composite Time poverty score model as well as separately across each time domain (General Time model, Family time model and Leisure model).

The socioeconomic and demographic predictors included in the estimation encompass a range of individual-level, household-level and spatial descriptors. The individual characteristics include age, sex, education, and employment status. The household level covariates include household income, whether there are elderly persons above 60 or children below 18 within household as well as the dwelling type. Given the persistence of apartheid spatial inequalities, we consider the commute time as this is expected to have significant implications on the time use of individuals.

Given the ordinal nature of the outcome variable (time poverty), the ordered probit regression was used for the multivariate estimation:

$$Y_i^* = X_i\beta + \epsilon_i$$

Where $i = 1, \dots, N$ individuals

Y_{it}^* is a latent dependent variable (unobserved variable) with ordered categories 1-5 (for individual time poverty elements) and 1-3 (for the composite time poverty index).

X_i is a vector of independent variables

β is a vector of unknown parameters to be estimated

ϵ_i is the error term for i^{th} individual

The full sample estimation the Time Poverty Score Model which included a dummy variable for female, indicated that women on average had a lower probability of reporting time poverty (Table 2). This is in stark contradiction to all the time-use survey based estimates that indicate women have less leisure hours than men. The apparent paradox where women report less time poverty despite previous studies indicating that women have fewer hours of leisure compared to men can be attributed to various factors, including societal expectations, gender roles, and the nature of women's responsibilities. While it may be true that women, on average, have less

leisure time than men, the perception of time poverty is influenced by gender roles and not aligned with the objective measure of time poverty.

Age is seen to have a non-linear effect on self-reported time poverty, aligning with the work-life cycle for both men and women. As expected, increased commute time as well as living in an informal dwelling increases subjective time poverty. The findings suggest that locational factors do influence subjective time poverty among men and women living in Gauteng. On the other hand, higher income levels are seen to reduce subjective time poverty across both genders. The number of elderly family members in the household has differential effect across genders, with it being negatively associated with subjective time poverty for men but not for women.

Table 2: *Reporting subjective time poverty: All, men and women*

	(All)	(Men)	(Women)
Variables	Time poverty	Time poverty	Time poverty
age	0.0459*** (0.0110)	0.0577*** (0.0177)	0.0359** (0.0141)
agesq	-0.000588*** (0.000128)	-0.000667*** (0.000207)	-0.000519*** (0.000163)
female	-0.275*** (0.0594)		
informal	0.444*** (0.0730)	0.438*** (0.116)	0.445*** (0.0940)
tertiary	0.117 (0.0794)	0.0685 (0.123)	0.127 (0.105)
unemployed	0.0172 (0.0718)	0.182 (0.114)	-0.0956 (0.0929)
income_levels	-0.126*** (0.0292)	-0.0908** (0.0448)	-0.141*** (0.0388)
children	-0.0225 (0.0183)	-0.0262 (0.0315)	-0.0161 (0.0226)
elderly	-0.218*** (0.0560)	-0.377*** (0.0877)	-0.0950 (0.0729)
commute_time	0.0880*** (0.0210)	0.0923*** (0.0315)	0.0786*** (0.0283)
/cut1	0.906*** (0.232)	1.369*** (0.360)	0.825*** (0.299)
/cut2	2.889*** (0.236)	3.246*** (0.367)	2.901*** (0.305)
Observations	5,339	2,028	3,311

*** significant at the 1% level ($p < 0.01$), ** 5% level ($p < 0.05$), or * 10% level ($p < 0.1$).

Next, we look at the individual components of subjective time poverty viz., General Time, Family time and Leisure time poverty. The results for the full sample presented in Table 3-5

indicate that although men reported more general and family time poverty than women, there is no statistical difference in the leisure time poverty reported by men and women. This is in stark contradiction to literature where women are found to be more time poor compared to men using objective measures. The dissonance between objective and subjective measures of time poverty is very clear through these findings. The explanation behind this anomaly can be attributed to social grooming of both genders but needs to be evaluated more deeply through further studies.

A disaggregated analysis by gender also revealed further similarities and dissimilarities in the predictors of subjective time poverty for men and women. The non-linear effect of age is clearly similar across men and women for all three components of time poverty (general, family and leisure). Other predictors common across genders are found to be informal dwelling and longer commute times, both of which were positively and significantly associated with the likelihood of reported time poverty across general, family and leisure time poverty.

Income is found to reduce the likelihood of subjective general and leisure time poverty only for women, not for men. On the other hand, being unemployed increased the subjective general time poverty for men but not women. Unemployment reduced the self-reported family time poverty for women but not for men. The varied association of unemployment with different aspects of time poverty for men and women is worth noting. The lack of a structured daily routine and the potential loss of social connections can further contribute to a heightened sense of time poverty, especially for men. The same is not seen to be true for women who are able to develop a sense of purpose through their contributions within the household despite being unemployed. In essence, while unemployment may increase the quantity of available time, the stressors and challenges associated with joblessness are seen to be severe for men resulting in higher reports of time poverty.

The presence of children in the household is associated with higher subjective general and leisure time poverty for women, but not for men. This is not surprising as women continue to be the primary care giver for children in the household, which eat into their leisure and general time availability. The presence of children in the household is however associated with lower reports of family time poverty for men and women.

Conversely, having an elderly family member in the house was found to be negatively and significantly associated with the likelihood of reporting general, family and leisure time poverty for men. For women, on the other hand, the presence of elderly only contributes to reduced family time poverty.

Table 3: *Self-reported general time poverty with time: All, men and women*

Variables	(All) Time	(Men) Time	(Women) Time
age	0.0345*** (0.00998)	0.0535*** (0.0163)	0.0222* (0.0126)
agesq	-0.000430*** (0.000114)	-0.000648*** (0.000187)	-0.000294** (0.000143)
female	-0.168*** (0.0566)		
informal	0.258*** (0.0718)	0.315*** (0.115)	0.227** (0.0920)
tertiary	-0.00466 (0.0757)	-0.196 (0.119)	0.114 (0.0984)
unemployed	0.0638 (0.0677)	0.238** (0.110)	-0.0375 (0.0865)
income_levels	-0.0872*** (0.0273)	-0.0357 (0.0425)	-0.110*** (0.0359)
children	0.0457*** (0.0171)	0.0461 (0.0302)	0.0528** (0.0209)
elderly	-0.126** (0.0516)	-0.148* (0.0818)	-0.106 (0.0666)
commute_time	0.0921*** (0.0204)	0.0751** (0.0310)	0.0984*** (0.0272)
/cut1	-1.746*** (0.219)	-1.267*** (0.343)	-1.876*** (0.281)
/cut2	1.274*** (0.218)	1.801*** (0.343)	1.129*** (0.279)
/cut3	1.627*** (0.218)	2.137*** (0.344)	1.494*** (0.280)
/cut4	3.585*** (0.226)	3.999*** (0.355)	3.531*** (0.290)
Observations	5,339	2,028	3,311

*** significant at the 1% level ($p < 0.01$), ** 5% level ($p < 0.05$), or * 10% level ($p < 0.1$).

Table 4: *Self-reported time poverty with family time: All, men and women*

	(All)	(Men)	(Women)
Variables	Family time	Family time	Family time
age	0.0152 (0.0101)	0.0199 (0.0163)	0.00726 (0.0130)
agesq	-0.000150 (0.000115)	-0.000161 (0.000186)	-9.62e-05 (0.000147)
female	-0.349*** (0.0584)		
informal	0.473*** (0.0745)	0.505*** (0.118)	0.449*** (0.0961)
tertiary	0.125 (0.0778)	0.169 (0.121)	0.0885 (0.102)
unemployed	-0.157** (0.0699)	-0.0235 (0.111)	-0.247*** (0.0905)
income_levels	-0.0895*** (0.0281)	-0.0967** (0.0436)	-0.0695* (0.0369)
children	-0.119*** (0.0177)	-0.180*** (0.0315)	-0.0844*** (0.0217)
elderly	-0.371*** (0.0523)	-0.569*** (0.0823)	-0.218*** (0.0682)
commute_time	0.0867*** (0.0210)	0.106*** (0.0311)	0.0666** (0.0286)
/cut1	-1.838*** (0.223)	-1.687*** (0.347)	-1.662*** (0.288)
/cut2	1.153*** (0.222)	1.311*** (0.345)	1.344*** (0.287)
/cut3	1.554*** (0.222)	1.670*** (0.346)	1.784*** (0.289)
/cut4	3.563*** (0.237)	3.552*** (0.362)	3.975*** (0.316)
Observations	5,339	2,028	3,311

*** significant at the 1% level ($p < 0.01$), ** 5% level ($p < 0.05$), or * 10% level ($p < 0.1$).

Table 5: *Self-reported time poverty with leisure time: All, Men and women*

	(All)	(Men)	(Women)
VARIABLES	Leisure	Leisure	Leisure
age	0.0357*** (0.0101)	0.0596*** (0.0165)	0.0194 (0.0128)
agesq	-0.000410*** (0.000115)	-0.000640*** (0.000188)	- (0.000145)
female	-0.0633 (0.0575)		0.000255*
informal	0.375*** (0.0720)	0.299*** (0.116)	0.426*** (0.0919)
tertiary	0.0455 (0.0768)	-0.113 (0.120)	0.139 (0.100)
unemployed	0.0599 (0.0686)	0.116 (0.111)	0.0220 (0.0879)
income_levels	-0.126*** (0.0280)	-0.0619 (0.0436)	-0.160*** (0.0365)
children	0.0308* (0.0176)	0.0254 (0.0314)	0.0394* (0.0215)
elderly	-0.207*** (0.0524)	-0.387*** (0.0829)	-0.0781 (0.0674)
commute_time	0.0757*** (0.0207)	0.0836*** (0.0315)	0.0648** (0.0275)
/cut1	-1.788*** (0.221)	-1.187*** (0.345)	-2.146*** (0.284)
/cut2	1.363*** (0.219)	1.982*** (0.346)	1.013*** (0.280)
/cut3	2.087*** (0.220)	2.630*** (0.348)	1.789*** (0.281)
/cut4	4.035*** (0.232)	4.525*** (0.365)	3.781*** (0.297)
Observations	5,339	2,028	3,311

*** significant at the 1% level ($p < 0.01$), ** 5% level ($p < 0.05$), or * 10% level ($p < 0.1$).

5. CONCLUSION

This study aimed to understand the extent and socio-economic predictors of subjective time poverty across genders, using a general population sample in Gauteng province of South Africa. While one in five within the sample reported to be either moderately or severely time poor, the study found significant gender-related differences in the perception of time poverty. In particular, men were found to be more likely to report time poverty compared to women. This is a surprising finding considering that studies based on objective measures of time poverty have found women to experience higher time poverty due to the disproportionate share of unpaid domestic and caregiving responsibilities, including household chores, childcare, and eldercare that they bear compared to men. The anomaly between subjective and objective measures of time poverty indicates that, despite the additional caregiving responsibilities that women shoulder, they may not always categorise these activities as time-consuming or burdensome; instead, they may view them as integral to their roles and relationships. As a result, women might not self-report high levels of time poverty because they perceive their time allocation as a fulfilling and meaningful part of their lives.

Moreover, societal expectations and gender norms play a crucial role in shaping perceptions of time use. Women may derive satisfaction and a sense of purpose from fulfilling their roles as caregivers and homemakers, even if these activities occupy a significant portion of their time. In contrast, men may have more leisure time but might also experience higher time pressure due to societal expectations around success and achievement. The pursuit of professional success and career advancement may lead to a feeling of time pressure, especially if men believe they need to invest substantial time in their careers to meet these expectations. The findings indicate that social context and individual perspectives contribute to the nuanced ways in which men and women assess their time and report feelings of time poverty. Further, evolving societal expectations regarding men's involvement in family life and parenting may be an additional contributor to increased perception of time poverty amongst men. This evolving role may lead to a sense of time scarcity, particularly if these responsibilities are in addition to demanding professional obligations. These plausible explanations can only be substantiated with additional information of time use patterns and underscores the need for studies that incorporate both objective and subjective measures of time poverty.

The study identified both similarities and dissimilarities amongst predictors of subjective time poverty across genders. While residing in an informal dwelling and lengthier commute times consistently correlates positively with the probability of experiencing time poverty across both genders and all time domains, some other covariates (income, children, elderly, and employed) were found to have differences in the association with time poverty for male and female. While income offered protection from time poverty for women, the same is not for men. Presence of children in the household is associated with higher time poverty for women but not for men. On the other hand, the presence of elderly in the household offers time poverty protection for men, but not for women.

Lastly, being unemployed ironically is associated with higher subjective general time poverty for men. Although this might seem surprising initially, unemployment can negatively impact an individual's overall well-being, reducing the enjoyment and fulfilment derived from leisure activities and family time. The lack of a structured daily routine and the potential loss of social connections can further contribute to a heightened sense of time poverty. In essence, while unemployment may increase the quantity of available time, the quality of that time is often diminished due to the stressors and challenges associated with joblessness. As a result, self-reported time poverty tends to be higher among the unemployed compared to those who are employed. In stark difference, unemployment alleviated female family time poverty, once again underscoring the gender perceptions and roles within society and household.

In conclusion, it can be seen that there exists a rather complex relationship between subjective time poverty and socioeconomic factors that is shaped by gendered norms and perceptions. More in-depth studies based on longitudinal data are required to understand the dynamics around subjective and objective time poverty and its determinants over time. This can help identify trends and assess the effectiveness of policy interventions in reducing time poverty among men and women. Comparative studies across other regions in South Africa and other countries will also provide valuable insights into the universality or uniqueness of time poverty challenges.

REFERENCES

- Abdurrahman, O.I. (2010), Time poverty: A contributor to women's poverty? *The African Statistical Journal*, 11, 16-36.
- Alkire, S., Roche, J. M., Ballon, P., Foster, J., Santos, M. E., & Seth, S. (2015). *Multidimensional poverty measurement and analysis*. Oxford University Press, USA.
- Apps, P., Rees, R. (2004), The household, time use and tax policy. *CESifo Economic Studies*, 50, 479-500.
- Bardasi, E., Wodon, Q. (2006), *Measuring Time Poverty and Analyzing its Determinants: Concepts and Application to Guinea*. Washington, DC: World Bank.
- Bianchi, S.M., Milkie, M.A., Sayer, L.C., Robinson, J.P. (2000), Is anyone doing the housework? Trends in the gender division of household labour. *Social Forces*, 79, 191-228.
- Bourguignon, F., & Chakravarty, S. R. (2003). The measurement of multidimensional poverty. *The Journal of Economic Inequality*, 1, 25-49.
- Buttler, F. (2013). What determines subjective poverty. An Evaluation of the Link between Relative Income Poverty Measures and Subjective Economic Stress within the EU, Horizontal Europeanization, Oldenburg: DFG Research Unit, www.horizontal-europeanization.eu/downloads/preprints/PP_HoEu_2013-01_buttler_subjective_poverty_0.pdf.
- De Kadt, J., Hamann, C., Mkhize, S. P. and Parker, A. (2021). Quality of Life Survey 6 (2020/21): Overview Report. Johannesburg: Gauteng City-Region Observatory. [10.36634/2021.db.1](https://doi.org/10.36634/2021.db.1)
- DeVoe, S. E. & Pfeffer, J. (2007). When time is money: the effect of hourly payment on the evaluation of time. *Organ. Behav. Hum. Decis. Process.* 104, 1–13.
- GCRO (2019) Quality of Life Survey 6 2020/2021. https://d3iy114y1zl2zq.cloudfront.net/media/documents/2022.07.17_Quality_of_Life_Survey_6_2020_21_Questionnaire_V1.2.pdf
- Giurge, L.M., Whillans, A.V. & West, C. (2020). Why time poverty matters for individuals, organisations and nations. *Nat Hum Behav* 4, 993–1003. <https://doi.org/10.1038/s41562-020-0920-z>
- Iqbal, F., Ahmad, M. B., Hussain, R. I., Aslam, S., & Ali, H. F. (2020). Time Poverty among Working Females in Pakistan: A Qualitative Study. *International Journal of Economics and Financial Issues*, 10(4), 170–175. <https://econjournals.com/index.php/ijefi/article/view/10251>
- Kielyte, J., and Kancs, d'Artis. (2002). Migration in the enlarged European Union: Empirical evidence for labour mobility in the Baltic states. *Journal of Baltic Studies*, 33(3), 259–279.
- Krueger, A. B. (Ed.). (2009). *Measuring the subjective well-being of nations: National accounts of time use and well-being*. University of Chicago Press.

Majid, H. (2018), Women's Work and Time Poverty, Dawn News.
<https://www.dawn.com/news/1410468>.

Mattingly, M. J., & Bianchi, S. M. (2003). Gender differences in the Quantity and Quality of free time: The U.S. Experience. *Social Forces*, 81(3), 999–1030.
<https://doi.org/10.1353/sof.2003.0036>.

Merz, J., & Rathjen, T. (2014). Time and income poverty: An interdependent multidimensional poverty approach with German time use diary data. *Review of Income and Wealth*, 60(3), 450-479.

Nackerdien, M. F. (2020). A Time Dimensional Extension to Standard Poverty Analyses in South Africa. PhD Thesis. University of Cape Town.

Newman, C. (2002), Gender, time use, and change: The impact of the cut flower industry in Ecuador. *World Bank Economic Review*, 16, 375-395.

Skinner, C. (2005). Coordination points: A hidden factor in reconciling work and family life. *Journal of Social Policy*, 34(1), 99-119.

StatsSA. (2001). A survey of time use: how South Africa women and men spend their time. Pretoria: Statistics South Africa.

StatsSA. (2013). A survey of time use, 2010. Pretoria: Statistics South Africa.

Thorbecke, E. (2013). Multidimensional poverty: conceptual and measurement issues. *The many dimensions of poverty*, 3-19.

Tomczyk, S., Altweck, L., & Schmidt, S. (2021). How is the way we spend our time related to psychological wellbeing? A cross-sectional analysis of time-use patterns in the general population and their associations with wellbeing and life satisfaction. *BMC public health*, 21, 1-9.

UNDP, United Nations Development Programme. (1995). Human Development Report. New York Oxford University Press.

<https://hdr.undp.org/system/files/documents/hdr1995encompletenostatpdf.pdf>

Vickery, C. (1977). The time-poor: A new look at poverty. *Journal of Human Resources*, 1(1): 27-48.

Wade, R.H. (2004), Is globalisation reducing poverty and inequality? *World Development* 32(4), 567-589.

Wagle, U. (2009). Multidimensional poverty measurement: Concepts and applications, New York: Springer.

Walker, K.E. (1973). Household work time: its implication for family decisions. *Journal of Home Economics*, 65(4): 7-11.

Whillans, A. V., Dunn, E. W., Smeets, P., Bekkers, R. & Norton, M. I. (2017). Buying time promotes happiness. *Proc. Natl. Acad. Sci. USA* 114, 8523–8527.