

**Introduction:** South Sudan TB treatment success has stagnated below 80% in the last three years. Furthermore in the 2011 cohort, the treatment success rate dropped to 72% compared to 75% success rate in the 2010 cohort. The low treatment success rate is mainly due to treatment defaulting of more than 10% i.e. 15% and 18% in 2010 and 2011 cohorts respectively. Treatment units located in major towns account for the greatest share of treatment defaulting rate. Urbanization of Juba city has resulted into increased case notification (2,913 cases of all forms in 2012 compared to 1,046 in 2008). The major concern is the decreasing treatment success rate mainly due to increasing defaulters up to (10-40%) as about four out of 10 patients enrolled on treatment are lost, defaulter rate currently stands at 14%, with a magnitude of as high as 40% when it comes to Juba County. There is no similar study that has been done to establish the factors that influence poor adherence to tuberculosis treatment in Juba County and the entire country at large.

**Objective:** to determine the factors influencing adherence to tuberculosis treatment among patients attaining treatment from the health facilities in Juba County, with the purpose of generating information necessary for stakeholders to improve TB control in County.

**Method:** the study adopted a cross-sectional design, employing quantitative techniques for data collection, from the populations of confirmed tuberculosis patients from age above 16, initiated on treatment at three health facilities, including ; Juba Teaching Hospital, Kator and Munuki Primary Health Care Centre PHCC, the study used census and survey processing system statistical package CSPro for data capturing (entry) and statistical package for the social sciences (SPSS) for data analysis, the data was analyzed at various levels such as univariate bivariate and multivariate levels.

**Results:** the study revealed that the degree of adherence to tuberculosis in Juba County stands at 35.60%, while non-adherence is as high as 64.40%. This implies that compliance is still quite very low in Juba County. *Health system factors;* all the respondents 351(100%) said they do not get any form of food support from the facility. Quite a substantial number 245 (69.8%) of respondents said they have to wait for long to get services (long waiting time. *socio-economic factors;* majority of the respondents 244 (69.5%) were un-employed, while 38 (11.11%) government uniformed employees (soldiers, police), and most of them as 191 (54.42%) were heads of families, *cultural*

*factor* ; quite a small number of 20 (4.7%) of the respondents believed that TB is a curse from God and 8 (2.3%) admitted they have ever used local treatment for TB. While 94 (26.8%) claimed to be stigmatized by family members, and 173 (49.3%) were stigmatized by neighbors.

**Conclusion:** among several factors measured ; health system factors, was found to have a significant association with patient's adherence to tuberculosis treatment, at bivariate analysis, among these factors are; patient-provider relationship, use of treatment supporters, giving patients appointments for the next visit, while cleanliness of the wards and space provided within the wards, shown strong significance at multivariate analysis. They influence positively, while, lack of food support for TB patients, stigmatization, lack of social support and long waiting time among other were influencing adherence negatively.

**Recommendations:** national tb program need to lobby for food support to tb patients .

Need to improve Health education approach to be more of patients centred so it can address patients related challenges.

Need to fill in Health centre staffing capacity gap.

Lobby for social support for the TB patients , in the areas like:- A) Leave with pay from their employers B) increase awareness to the general public to reduce stigmatization.