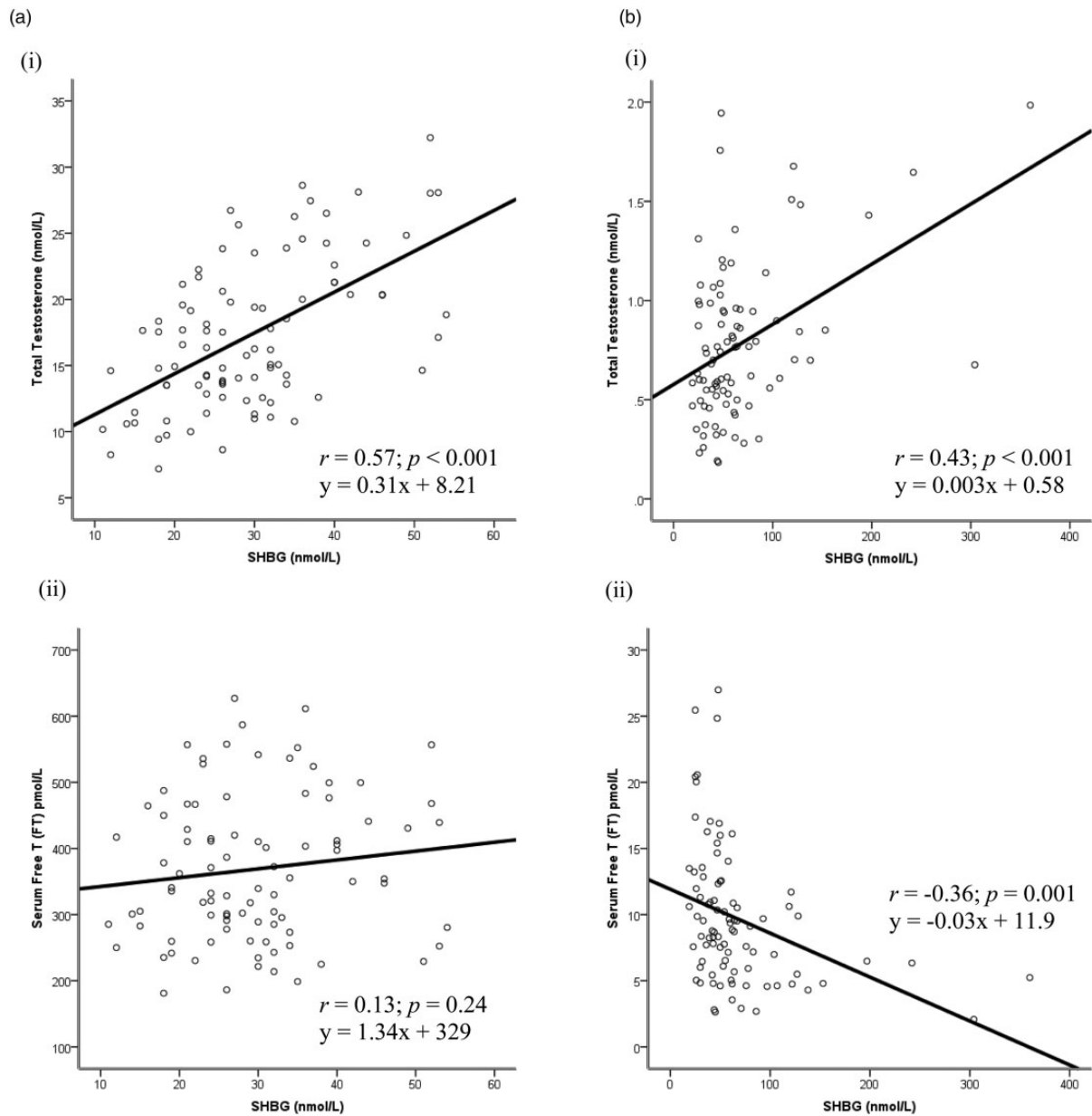


## Sex hormone-binding globulin has no effect on salivary testosterone

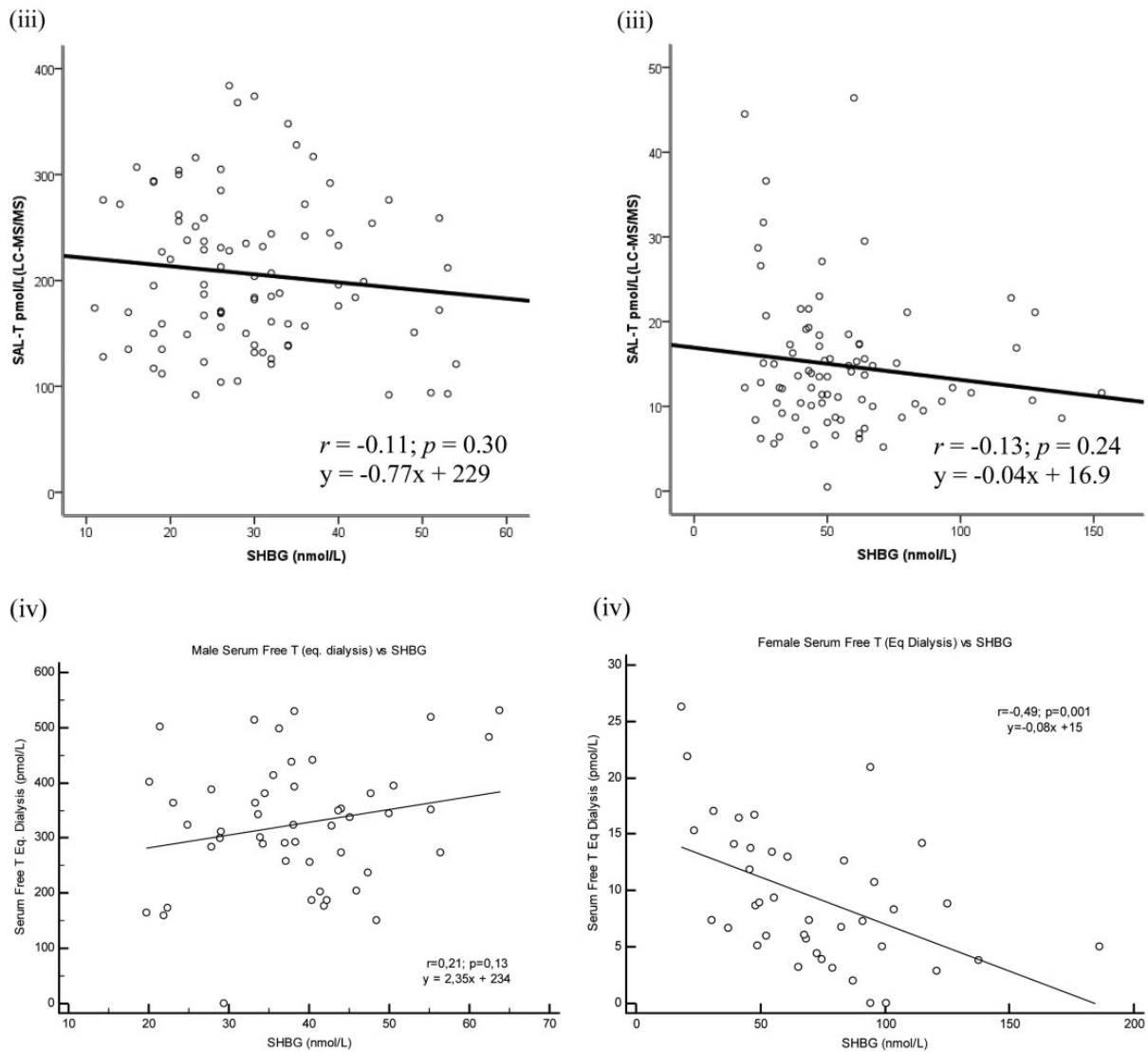
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We would like to follow up our 2014 publication in this journal (1) by submitting further validation data to support the measurement of salivary testosterone (T), highlighting its independence from variations in circulating sex hormone-binding globulin (SHBG), unlike serum total T which is positively correlated with SHBG. All analyses were performed as previously described (1). In addition, further samples were collected from, 48 males and 38 females, healthy volunteers (mean age 32 y, range 18–66). Ethical committee approval was granted from Ghent University Hospital. These samples were analysed for salivary T, total T and equilibrium dialysis using liquid chromatography-tandem mass spectrometry (2).

Figure 1 shows that: (i) serum total T is significantly and positively correlated with SHBG in both men (n=93) and women (n=86); (ii) serum calculated free T is not correlated with SHBG in men but negatively correlated with SHBG in women; (iii) salivary T is not correlated with SHBG in either men or women; (iv) serum-free T measured using equilibrium dialysis is not correlated with SHBG in men (n=48) but, like calculated free T, is inversely correlated with SHBG in women (n=38). These results demonstrate that salivary T is not influenced by variations in serum SHBG, unlike the analogue serum free T direct assay (3). The sexually dimorphic relationship between free T, whether calculated or measured by equilibrium dialysis, and SHBG, is an interesting observation which, to the best of our knowledge, has not been previously reported.



**Figure 1.** Correlation of SHBG in men (a) and women (b) with (i) serum total T, (ii) serum calculated free T, (iii) salivary T, (iv) serum free T (Eq. dialysis)



**Figure 1.** Continued.

*Declaration of conflicting interests*

FCWW has acted as a consultant for Bayer-Schering, Eli Lilly and Besins Healthcare and also participated in advisory board meetings and lectured on their behalf. FCWW has received lecture fees from Bayer-Schering and Besins Healthcare.

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*Ethical approval*

This study was granted ethical approval from Oldham Research Ethics Committee (09/H1011/18).

*Guarantor*

BK.

*Contributorship*

All authors contributed to the preparation of the letter.

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