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Testimony in Opposition of HB2238  
Senate Committee on Education  
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Members of the Senate Committee on Education, thank you for the opportunity to provide testimony in opposite to House Bill 2238. I am a professor at Wichita State University who conducts research and teaches in the areas of gender, education, and adolescence and the transition to adulthood. I am writing to urge you to vote against HB2238. While there are numerous reasons to vote against this bill, I will focus on one – that it is premised on a misunderstanding of biological sex and gender differences.

HB 2238 is premised on a misunderstanding of the nature of biological sex, gender identity, and differences between males and females. While research often does find a significant average difference in certain traits, such as throwing ability or running speed, these averages do not reflect the full distribution of traits among girls/women and boys/men, as there is significant variation within each sex category on any given trait. As such, these average differences fail to capture **the incredible degree of overlap between males and females on any given trait**. A meta-synthesis by Zell and colleagues published in American Psychologist in 2015 is strong evidence of the overlap and similarity among males and females along most traits. A meta-synthesis is a research method that examines the degree of consensus across research studies by examining the average finding across studies. This study, cited over 250 times by other researchers, found that for 85% of traits there was little to no difference between males and females. Importantly, even for those traits, such as throwing ability, where there were larger average differences, there was still significant overlap among males and females. The takeaway here is that **there will always be girls who outperform many boys in any given sport**, and as long as we continue to sort students into teams based on gender and not ability, we must recognize that there is going to be some similarity in the athletic ability and performance of those on female teams and male teams. While there may be an average advantage of males over females on some athletic skill, that certainly does not suggest that all males will have an advantage over all females on those teams.

Research is also clear that biological sex is not straightforward and does not always fit neatly into one category or another. Approximately **1-2% of the population is born with variation in sex characteristics**, meaning for example that they are not genetically XX or XY, their reproductive organs developed differently than their genetic makeup would predict, and/or their external genitalia are inconsistent with their internal reproductive organs. In addition, there is a great deal of variation in levels of sex hormones, and some women are born with higher levels of testosterone while some men naturally have lower levels of testosterone. These hormone levels are also not static – they increase and decrease in response to environment and behavior (for example, testosterone rises after engaging in competitive sports). **Limiting sports participation, which is linked to a host of positive social and emotional outcomes, to students whose bodies fit a narrow definition of “normal” sex and gender is inherently discriminatory.**

This is a highly problematic bill, based on gender stereotypes and **motivated by bigotry against transgender and gender nonconforming youth**. All youth deserve the same opportunities to participate in extracurricular activities as their authentic selves. Please stop this bill now.