The problem is in NP since, given a set of k counselors, we can check that they cover all the sports.

Suppose we had such an algorithm $\mathcal{A}$; here is how we would solve an instance of *Vertex Cover*. Given a graph $G = (V, E)$ and an integer k, we would define a sport S_e for each edge e, and a counselor C_v for each vertex v. C_v is qualified in sport S_e if and only if e has an endpoint equal to v.

Now, if there are k counselors that, together, are qualified in all sports, the corresponding vertices in G have the property that each edge has an end in at least one of them; so they define a vertex cover of size k. Conversely, if there is a vertex cover of size k, then this set of counselors has the property that each sport is contained in the list of qualifications of at least one of them.

Thus, G has a vertex cover of size at most k if and only if the instance of *Efficient Recruiting* that we create can be solved with at most k counselors. Moreover, the instance of *Efficient Recruiting* has size polynomial in the size of G. Thus, if we could determine the answer to the *Efficient Recruiting* instance in polynomial time, we could also solve the instance of *Vertex Cover* in polynomial time.

[1] ex195.705.667