Group by Subgroup within study	Study name	Subgroup within stud	y	St	atistics fo	r each	study	Hedges's g and 95% CI						
		Hee	edges's S	Standard error	Variance	Lower		Z-Valuep	-Value					
P.E. vs OCS	Karatrantou et al. (2020) A	P.E. vs OCS	2,264	0,421	0,177	1,438	3,089	5,375	0,000		- 1	- 1	┢	-
P.E. vs OCS	Karatrantou et al. (2020) B	P.E. vs OCS	1,328	0,362	0,131	0,619	2,036	3,672	0,000		- 1	-	╼┤	- 1
P.E. vs OCS	Roh et al. (2018)	P.E. vs OCS	0,219	0,356	0,127	-0,480	0,917	0,614	0,539		- 1	┢	·	- 1
P.E. vs OCS			1,254	0,580	0,336	0,118	2,390	2,163	0,031		- 1		-	- 1
R.A vs OCS	Bae et al. (2021)	R.A vs OCS	0,143	0,395	0,156	-0,631	0,916	0,362	0,718		- 1	<b>-</b>	·	- 1
R.A vs OCS	Roh et al. (2020)	R.A vs OCS	0,038	0,428	0,183	-0,802	0,877	0,088	0,930		- 1	+	· 1	- 1
R.A vs OCS	Violan et al. (1997)	R.A vs OCS	-0,344	0,403	0,162	-1,133	0,446	-0,853	0,394		- I ·	╼┼	- 1	- 1
R.A vs OCS			-0,055	0,235	0,055	-0,517	0,406	-0,235	0,814		- 1	+	- 1	ı
										-4,00	-2,00	0,00	2,00	4,00

**Figure 9.** Forest plot of changes in performance on the MIHS in students practicing Olympic combat sports compared to an active control group, stratified by type of control group activities. The values shown correspond to effect sizes (Hedges' g) with 95% confidence intervals (CI). The squares represent the effect sizes of each study, with their size indicating the statistical weight of each study within the meta-analysis. The studies are divided into two subgroups: physical education (P.E.) vs. Olympic combat sports (OCS) and recreational activity (R.A.) vs. Olympic combat sports (OCS). Positive values favor students practicing Olympic combat sports, while negative values favor the active control group. The red diamonds represent the pooled effect sizes for each subgroup.

Study name	Subgroup within study	Statistics for each study							Hedges's g and 95% CI					
		Hedges's g	Standard error	Variance		Upper limit	Z-Value	p-Value						
Kim et al. (2011)	Children and/or adolescents	0,668	0,384	0,147	-0,084	1,420	1,740	0,082	- 1	- 1	-	- I	- 1	
Roh et al. (2018)	Children and/or adolescents	-0,023	0,355	0,126	-0,720	0,673	-0,065	0,948			+			
Roh et al. (2020)	Children and/or adolescents	0,382	0,433	0,187	-0,466	1,229	0,882	0,378				-		
Sekulic et al. (2006)	Children and/or adolescents	1,677	0,236	0,056	1,215	2,139	7,110	0,000				<b>-₽</b>		
		0,707	0,434	0,188	-0,143	1,558	1,629	0,103			-	-		
Bae et al. (2021)	University students	0,572	0,403	0,162	-0,218	1,361	1,419	0,156			<del> -</del>	- I		
Mohammed et al. (2020) A	University students	1,372	0,287	0,082	0,809	1,935	4,778	0,000			-			
Mohammed etl al. (2020) B	University students	0,684	0,261	0,068	0,173	1,195	2,626	0,009				-		
		0,903	0,255	0,065	0,404	1,403	3,546	0,000				-		
									-4,00	-2,00	0,00	2,00	4,00	
									Fav	ours con	trol Fa	vours OC	CS	

Figure 10. Forest plot of changes in performance on the sit-and-reach test in students practicing Olympic combat sports compared to an active control group, stratified by age group. The values shown correspond to effect sizes (Hedges' g) with 95% confidence intervals (CI). The squares represent the effect sizes of each study, with their size indicating the statistical weight of each study within the meta-analysis. The studies are divided into two subgroups: children and/or adolescents, and university students. Positive values favor students practicing Olympic combat sports, while negative values favor the active control group. The red diamonds represent the pooled effect sizes for each subgroup.

Study name	Subgroup within study	Statistics for each study								Hedges's g and 95% CI				
		Hedges's	Standard error	Variance		Upper limit	Z-Value	p-Value						
Kim et al. (2011)	<60 min	0,668	0,384	0,147	-0,084	1,420	1,740	0,082		1	-	-		
Mohammed et al. (2020) A	<60 min	1,372	0,287	0,082	0,809	1,935	4,778	0,000			-	•		
Mohammed etl al. (2020) B	<60 min	0,684	0,261	0,068	0,173	1,195	2,626	0,009			-	-		
Sekulic et al. (2006)	<60 min	1,677	0,236	0,056	1,215	2,139	7,110	0,000				-#-		
		1,131	0,264	0,070	0,613	1,648	4,280	0,000				•		
Bae et al. (2021)	60 min or more	0,572	0,403	0,162	-0,218	1,361	1,419	0,156			╁	-		
Roh et al. (2018)	60 min or more	-0,023	0,355	0,126	-0,720	0,673	-0,065	0,948			+			
Roh et al. (2020)	60 min or more	0,382	0,433	0,187	-0,466	1,229	0,882	0,378			┤┺╌	-		
		0,277	0,227	0,051	-0,168	0,721	1,221	0,222			-			
									4,00	-2,00	0,00	2,00	4,00	
									Fav	ours con	trol Fa	vours O	CS	

**Figure 11.** Forest plot of changes in performance on sit-and-reach test in students practicing Olympic combat sports compared to an active control group, stratified by session duration. The values shown correspond to effect sizes (Hedges' g) with 95% confidence intervals (CI). The squares represent the effect sizes of each study, with their size indicating the statistical weight of each study within the meta-analysis. The studies are divided into two subgroups: sessions lasting less than 60 minutes and sessions lasting 60 minutes or more. Positive values favor students practicing Olympic combat sports, while negative values favor the active control group. The red diamonds represent the pooled effect sizes for each subgroup.