the values are markedly decreased when fibers are placed in transverse direction. Multidirectional GFRC possess better properties as compared to unidirectional but still less than longitudinal fibers (Malchev et al., 2010; Shah, 1998). The dissemination of glass fibers display distinctive properties, and rely on its application. Either these fibers are equitably circulated or are situated in a particular zone. If these fibers are evenly circulated, it upgrades the wear resistance; however, in the event that they are situated at one place they can increment the strength and quality. It has been accounted for that resin-based materials fortified with short glass fibers, arbitrarily distributed, acquired higher estimations of flexural strength, durability, and compressive strength. Short fibers haphazardly dispersed give an isotropic reinforcement in numerous directions. However from engineering applications, it has been realized that the position and introduction of the strengthening material inside a development impacts mechanical properties (Dyer et al., 2004).

For the most part, the volume division of fibers in GFRCs is high, up to 60 vol.%, but in dentistry, the fiber division is moderately low. The reason is because of the way that glass fiber ought to be secured with a layer of unfilled polymer or with a layer of particulate filler composite (Lassila and Vallittu, 2004). The wear conduct of GFRC with various concentrations of fiber volume has been reported. It was found that with 7.6 wt.% glass fiber the sample is potentially stacked with an excessive number of fibers bringing about a group of fibers with little matrix. There are critical connections between glass fibers bringing about a poor holding between fibers and network. On the off chance is that these are being hauled out of matrix and additionally framework being expelled from around the fibers prompting a high wear rate. The high grouping of glass fibers could prompt the untimely fiber break. The perfect amount of fiber for unrivaled wear resistance is between 2.0 and 7.6 wt.% for the matrix (Callaghan et al., 2006).

To avoid voids between the matrix and the fiber and to increase load-bearing potential, glass fibers should have high degree of impregnation within the resin matrix (Lastumäki et al., 2003). If the impregnation of glass fibers with the polymer matrix is poor, it may lead to several drawbacks including microcrack formation, decreased flexural strength, decreased Young's modulus, and increased water sorption (Abdulmajeed et al., 2011). The crack formation is responsible for entry of water molecules from surrounding media, which decreases the bond strength and hence causes hydrolytic degradation of GFRC (Lassila et al., 2002; Pantano et al., 1992). It further causes staining or discoloration due to bacterial ingression into the voids. This issue can be resolved by preimpregnating glass fibers with the resin monomer. The preimpregnation will enhance the bonding between aged fibers reinforced composite with the new composite resin by interpenetrated bonding mechanism. It has been used in denture base polymers and removable denture prosthesis. The adhesion between glass fibers and resin matrix is vital for the success of restoration. It is enhanced by reacting silane coupling agent with the organic matrix and inorganic filler.