

NORM POWER OF SNORKELERS AND SCUBA DIVERS IN THE FLORIDA KEYS

Mary Allen and David Loomis, East Carolina University

Snorkeling and SCUBA diving are popular activities of economic and social importance to coastal areas. As such, the sustainability of these activities in coral reef ecosystems depends on continued ecological health, as well as the ways in which people behave in those ecosystems. Snorkelers and divers can minimize their impacts to coral reefs through responsible recreation behaviors, which are partly guided by social norms. The power of social norms lies in the behavioral obligations imposed by a group, and in the informal sanctions enforced by others or felt by one's self when conforming to or violating those obligations. Social standards are normative if they have crystallized (high agreement) and have strong intensity (high importance or strength).

This study examined the norm power of a series of obligation and embarrassment evaluations of nonresident snorkelers and SCUBA divers in the Florida Keys. According to the norm power model, as the obligation to comply with a norm increases, so does crystallization about that norm. Since SCUBA diving requires extensive certification training, it was hypothesized that divers would evaluate obligation and embarrassment variables higher than snorkelers, resulting in higher norm power. It was also expected that diver obligations would be more crystallized than snorkelers.

Respondents were asked the extent to which they were obligated to do twelve different behaviors while snorkeling or diving, and subsequently, how embarrassed they would feel if others saw them violating each of those obligations. Norm power was calculated for each behavior item as the product of the obligation value (-3 to +3 scale) and the corresponding embarrassment value (1 to 5 scale). For a visual representation of norm crystallization, analyses incorporated the Potential for Conflict Index² (PCI²), which was based on a distance function for response scales.

In our findings, all norm power variables were positive, meaning that all respondents felt at least some obligation to acquiesce with each statement. Both snorkelers and divers exhibited the highest norm power regarding obligations to not touch or break live coral, or to anchor on coral reefs. Both groups also had high agreement (low PCI²) for those behaviors. They felt the least amount of norm power with respect to swimming close to marine mammals.

Norm power differed between groups for maintaining buoyancy control, operating a boat near a dive flag, picking up garbage from the sea floor, feeding fish, and taking pieces of dead coral. Despite differences, both groups exhibited high consensus regarding buoyancy, but the least amount of agreement concerning boating operations.

Results for norm power and crystallization suggest that both snorkelers and divers are obligated to recreate in ways that do not harm coral ecosystems. However, differences exist for behaviors that may be more relevant or made aware to divers than to snorkelers. These results are interesting when considering the established regulations and management practices in the Florida Keys. This is particularly relevant to planning and management of recreation opportunities and conservation goals for ecosystems, and can

help determine appropriate communication strategies that target certain behaviors.