Go Functional Improvement and Tourism

Go FIT eHandbook for tourists

Erasmus+

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INTRODUCTION

Athletic tourism offers an excellent possibility not only to keep tourists active during their vacations but also to help them adopt a lifelong healthy lifestyle, this Guide discusses and explains the importance of exercise and physical fitness for a healthy life. It presents effects of physical activity on health through different exercise programs.

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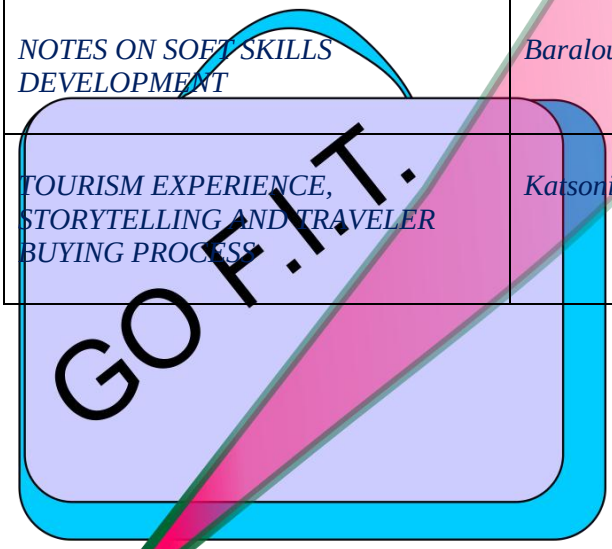

AQUATIC EXERCISE FOR FUNCTIONAL IMPROVEMENT

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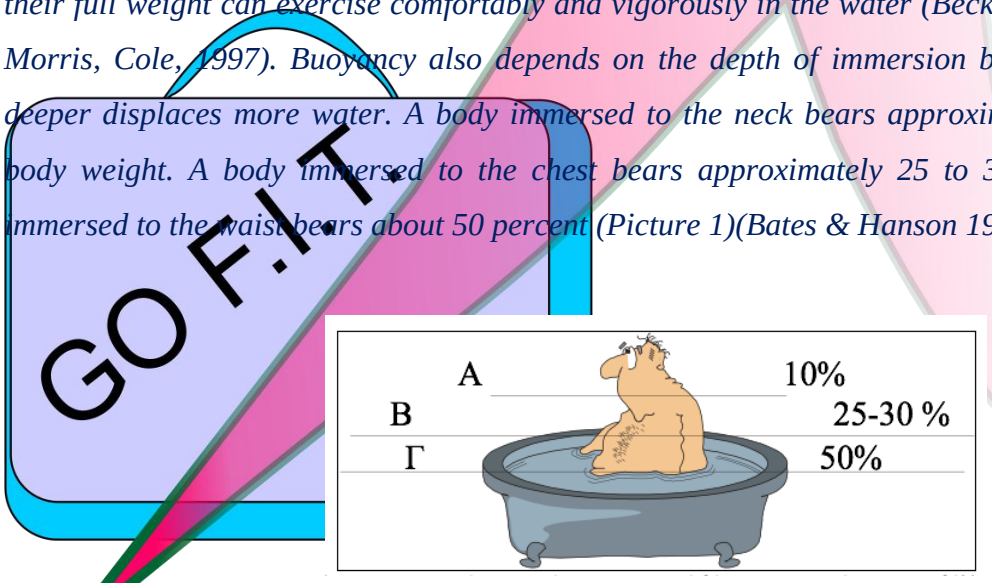
The use of the aquatic environment for exercise is beneficial to the trainee due to its peculiarities. For example, we rarely consider the resistance of air when we do a leg lift on land. We assume that all the resistance is provided by the effect of gravity on the leg. When this exercise is performed in water, however, the effect of gravity is opposed by the force of buoyancy (Foley et al., 2003). Therefore, most of the resistance to movement comes from the fluid resistance of the water and not the weight of the leg (Bates & Hanson 1996; Becker & Cole, 1997; Ruoti, Morris, Cole, 1997).

The principles of the aquatic environment are: buoyancy, drag, viscosity, fluid resistance, hydrostatic pressure and water temperature (Bates & Hanson 1996; Becker & Cole, 1997; Ruoti, Morris, Cole, 1997).

Buoyancy

Archimedes' Principle: The loss of weight of a submerged body equals the weight of the fluid displaced by the body.

Buoyancy provides many benefits for water exercisers. It decreases the effects of gravity and reduces weight bearing or compression of joints. Many people who cannot exercise on land bearing their full weight can exercise comfortably and vigorously in the water (Becker & Cole, 1997; Ruoti, Morris, Cole, 1997). Buoyancy also depends on the depth of immersion because being immersed deeper displaces more water. A body immersed to the neck bears approximately 10 percent of its body weight. A body immersed to the chest bears approximately 25 to 35 percent, and a body immersed to the waist bears about 50 percent (Picture 1)(Bates & Hanson 1996).



Picture 1. *The weight bearing vary from the depth of immersion*

Just as gravity assists or resists movements on land, buoyancy can assist or resist movement in the water. Because the force of buoyancy is vertically upward, any buoyed movement toward the surface of the pool is buoyancy assisted. Any movement of a buoyant object toward the pool bottom is buoyancy resisted (Picture 2). When equipment is added, buoyancy and gravity become more involved and affect muscle use (Bates & Hanson, 1996).

A *B*

Picture 2. A: *any buoyed movement toward the surface of the pool is buoyancy assisted,* ***B:*** *Any movement of a buoyant object toward the pool bottom is buoyancy resisted,*

Relative density (specific gravity)

The relative density of an object is the property that determines whether the object will float. If this value is greater than 1, the object will sink; if it is less than 1, the object will float. If the value is exactly 1, the object will float just below the surface of the water (Bates & Hanson, 1996). The relative density of a body depends on its composition. The specific gravities of fat, bone and lean muscle are 0.8, 1.5 to 2.0 and 1.0, respectively. People who are lean and muscular will tend to sink; those with more adipose tissue tend to float (AEA, 2010).

Drag

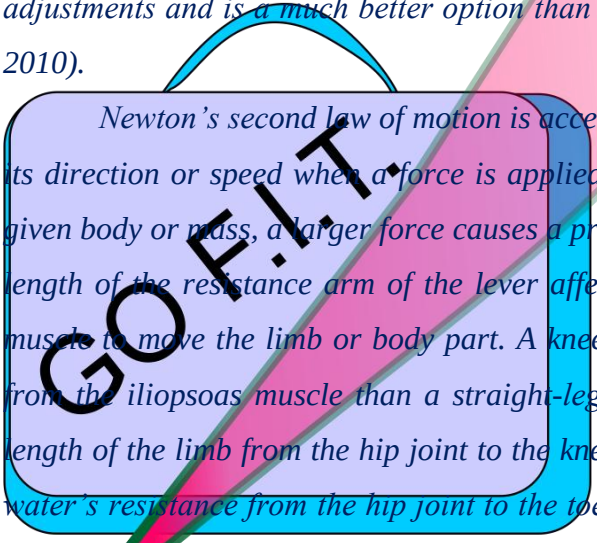
Movement in water tends to slow down quickly. Drag, the resistance you feel to movement in the water, is a function of fluid characteristics (viscosity), frontal shape and size, and the relative velocity between the participant and the water (Bates & Hanson, 1996). The results of drag make for a very different loading to the muscles during exercise in the water compared to land exercise. On land, your muscle load decreases when you achieve a constant speed. In the water, you have a constant muscle load provided by the water through full range of motion (AEA, 2010).

Viscosity

Viscosity refers to the friction between molecules of a liquid or gas, causing the molecules to tend to adhere to each other (cohesion) and, in water, to a submerged body (adhesion). This friction between molecules, or the water's viscosity, is what causes resistance to motion. Because water is more viscous than air, water provides more resistance to motion than air. As Galileo discovered, friction or viscosity causes an object to fall slower through water than air. He found that a combination of the surface area of an object and its speed determines the resistance to the motion caused by the fluid viscosity (drag). During exercise, additional resistance increases the intensity of the movement and thus requires greater muscular effort (Bates & Hanson, 1996).

In water exercise, the resistance of the water increases with the speed or velocity of movement. When speed is increased, range of motion and body position can be compromised. The most effective way to train a muscle is through a full range of motion. It is also difficult to push against the water's resistance in all directions of movement when using fast, ballistic movements. Additionally, some individuals are not able to maintain movement at speeds high enough to alter or influence intensity.

Options include hand position (drag shape), lever arms (arms and legs), adding impact (acceleration), using impeding or assisting arms (action/reaction), and traveling (total body inertia). There are other options and combinations of options as well. Altering intensity with these options does not compromise range of motion or safety. Individuals could work through a full range of motion against the water's resistance in all directions and promote muscle balance. Using the laws and principles of the water can help individualize intensity alterations through a variety of adjustments and is a much better option than merely adjusting speed (Bates & Hanson, 1996; AEA, 2010).



Newton's second law of motion is acceleration, which involves how fast an object will change its direction or speed when a force is applied. Acceleration is how fast you change velocity. For a given body or mass, a larger force causes a proportionally larger acceleration. In exercise, the length of the resistance arm of the lever affects intensity or the amount of energy required by the muscle to move the limb or body part. A knee lift, or shortened resistance arm, requires less effort from the iliopsoas muscle than a straight-leg kick. In a knee lift, the water's resistance along the length of the limb from the hip joint to the knee joint must be overcome. In a kick, the amount of the water's resistance from the hip joint to the toes along the full length of the leg must be overcome. It is easy to understand why a kick requires more muscular effort than a knee lift.

The same is true of movements performed with the arms. A lateral lift of the arms with the elbows bent (shorter resistance arm) requires less effort than a lateral lift of the arms with the elbows extended (longer resistance arm) (Picture 3) (Bates & Hanson, 1996; AEA, 2010).

Picture 3. *Elbows bent (shorter resistance arm) requires less effort, elbows extended (longer resistance arm) requires more effort.*

Hydrostatic pressure

Pascal's law states that fluid pressure is exerted equally on all surfaces of an immersed body at a given depth (Bates & Hanson, 1996). Hydrostatic pressure affects internal organs of the body as well as the skin. Hydrostatic pressure can decrease swelling and pressure, especially in the lower extremities that are immersed deeper. However, people who have respiratory disorders might have difficulty breathing when immersed in the water past the rib cage due to the hydrostatic pressure (Bates & Hanson, 1996; AEA, 2010).

Aquatic Equipment

An increasing variety of fitness equipment is available for use in aquatic training. Some of this equipment is used in land fitness and can be brought into the aquatic environment, whereas other equipment is developed specifically for use in the water (AEA, 2010).

Aquatic equipment falls into five general categories:

- *Buoyant, Drag, Weighted, Rubberized, Flotation*

Following is a partial list of the general types of equipment used in the aquatic environment:

- *Foam hand bars, Foam noodles, Foam belts for around the waist, Foam kickboards, Foam wafers or boards*
- *Plastic paddles, Fins—hand held or attached on the ankles, Plastic hand-held drag equipment, Drag parachutes*

- *Balls—beach balls, water polo balls, weighted balls, and so on*
- *Various hand-held weighted dumbbells*
- *Rubber tubing and bands*

Before adding equipment to your aquatic program, you should recognize the purpose of the equipment, be aware of all safety considerations, and understand how the equipment will alter training results. It is important to consider assisted and resisted movement, agonist and antagonist muscle relationships, type of muscle contractions, and the effect each type of equipment has on single- and multiple- joint movement.

Buoyant Equipment

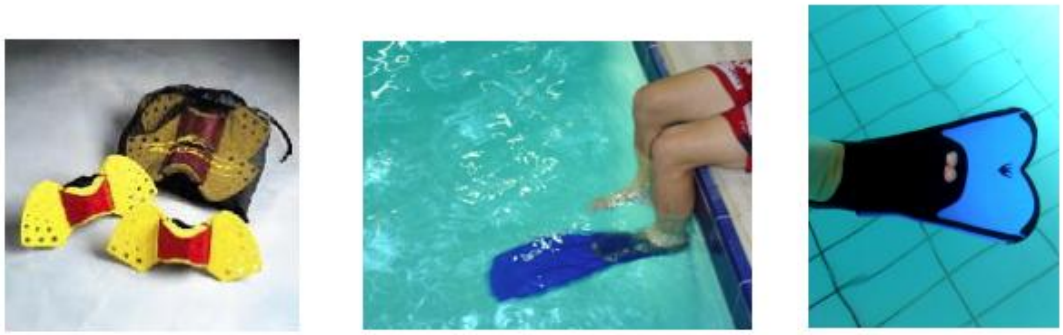
Buoyant equipment is specific to the aquatic environment. This equipment is comprised of a material such as dense closed-cell foam that floats in the water, or is filled with air, such as a ball (Picture 4). Although lightweight on land, buoyant equipment can create a great deal of resistance in the water. It interacts with the forces of buoyancy. We know that the buoyancy vector is vertical, points upward, and that buoyancy affects movement toward the surface and bottom of the pool (AEA, 2010).

Picture 4. *Buoyant equipment*

Drag Equipment

Drag equipment satisfies the muscle balance equation more simply than if using weighted or buoyant resistance. Introducing drag equipment simply increases the drag forces of the water. Drag equipment usually increases the surface area to create additional resistance for muscle action.

The important concept to note regarding the drag directional force vector is that drag always opposes the direction of movement. The amount of resistance created by a piece of drag equipment is based on the frontal surface area, shape, velocity or speed of the movement, turbulence, and water density (Picture 5) (AEA, 2010).



Picture 5. *Drag equipment*

Flotation Equipment

Flotation equipment is primarily used to create neutral buoyancy. There are many types of flotation belts available for use in deep water. The individual might want to use a flotation belt while using drag fins in the hands or on the ankles in deep water. Flotation belts can also be used with buoyant leg cuffs and hand bars. Flotation equipment can be used for stretching and relaxation programs allowing free movement in deep or shallow water. Sometimes buoyed resistance equipment is used for flotation. An example is using foam hand bars while in a supine position to do abdominal crunches. In this case, the hand bars are used for maintaining neutral buoyancy more than for resistance (Picture 6) (AEA, 2010).

A *B* *C*

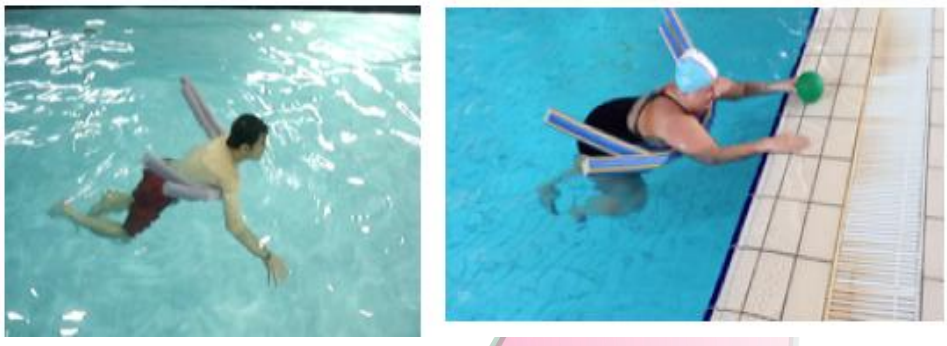
Picture 6. *A: foam belts, B: use a flotation belt while using drag fins on the ankles in deep water, C: use a foam noodle*

Avoid jumping into the pool while wearing equipment; instead, sit on the side of the pool, put the equipment on, and then slip into the pool from the side, or enter from steps, a ladder, or a ramp.

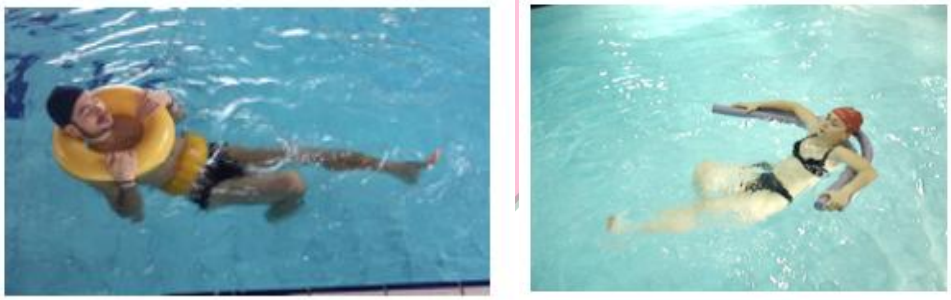
Make sure that the flotation equipment is attached to the trunk of the body (belt or vest); also, you should be comfortable in water over your head and be able to regain vertical position (AEA, 2010).

Deep and Shallow water exercises

To increase the mobility of the lower and upper body joints, the movements should be performed at a slow pace, in a wide range of motion and with control. In the deep water exercises, the participants will feel more comfortable if perform the exercises in a prone or in an upright position (Picture 7). Later they can perform similar exercises in a supine position (Picture 8). Exercises to increase mobility can be performed also in a shallow water, for the knee, hip and shoulder joint.



Picture 7. *Deep water mobility exercises in a prone or in an upright position*

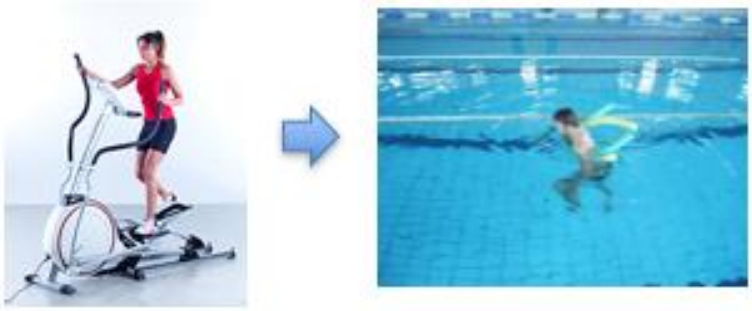


Picture 8. *Deep water mobility exercises in a supine position*

In the water, can be performed all the type of exercises, in similar way like the land. Below are examples of exercises performed on land and in the water. In the deep water, can performed running (Picture 9), bicycle (Picture 10) (Costa et al., 2018), elliptic training (Picture 11), step movement (Picture 12), upper limb strength training (Picture 13), (Foley et al., 2003; Tsourlou et al., 2006) lower limb strength training (Picture 14) and abdominal training (Picture 15).

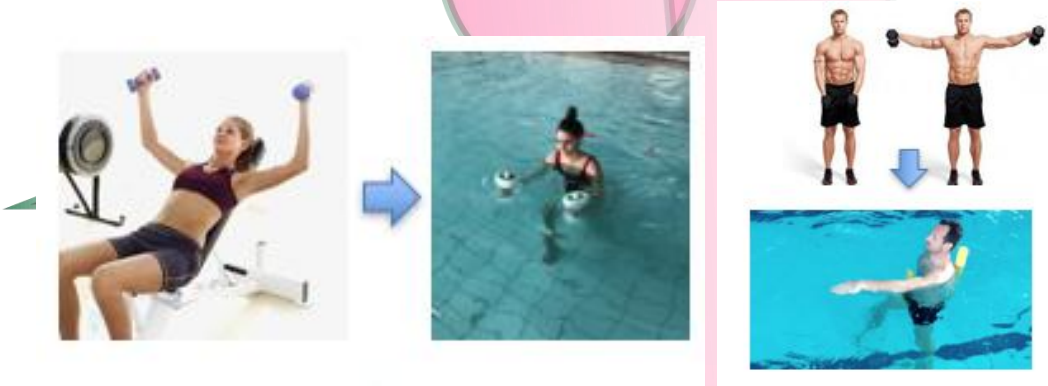
Picture 9. *Running on land and in deep water*

Picture 10. *Bicycle on land and in deep water*

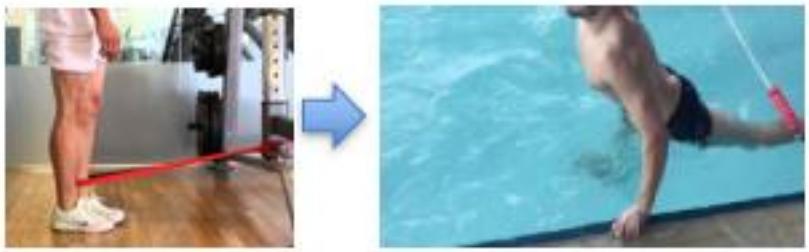


Picture 11. *Elliptic movement on land and in deep water*

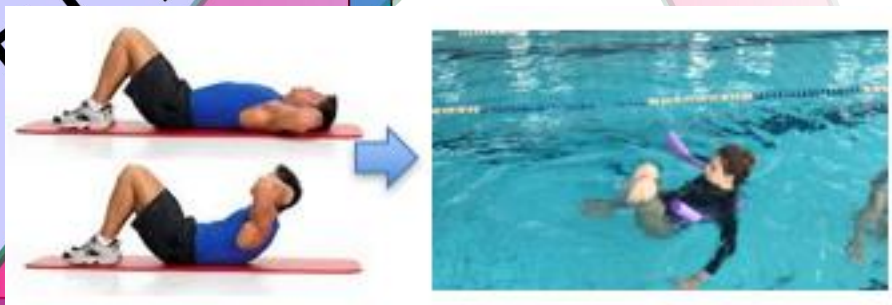
Picture 12. *Step movement on land and in deep water*



Picture 13. *Upper limb strength training on land and in shallow water*



Picture 14. *Lower limb strength training on land and in shallow water*



Picture 15. *Abdominal training on land and in shallow water*

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GO FIT SPINE EXERCISE FOR TOURISTS

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We all know already that bad posture leads to Neck and back pain. These types of pain are usually related to:

- *muscular pain*
- *Weak muscles*
- *Tight muscles*
- *Stiff joints*

If we don't deal with it on time, pain becomes more severe and more difficult to overcome it. That is why everyone has to "pay attention" to its body pain signal!

BUT we have always to keep in mind that the HMS functions as an integrated system!!!The everyday functioning of the human body is an integrated and multidimensional system, not a series of isolated, independent pieces.

How are Neck and torso muscles activated in order to provide dynamic spine Stabilization? Neck and torso muscles are activated eccentrically during upright position (like wire rope). When the body moves away from the gravity center, these muscles control it while are activated against gravity.

Where is this gravity line? Gravity line lines forward therefore the back extensors muscle group controls the upper body which include the neck extensors (upper trapezoid muscle, erector spinal group etc).

On the other hand when the gravity line lines backward, the back flexor muscle group controls the upper body which include abdominals, sternocleidomastoid etc).

Finally, when the gravity line moves laterally the opposite lateral torso muscles are activated.

For the neck pain patients usually the problem is that their deep neck flexors demonstrate constant activation during flexion irrespective of the movement pattern while In the same time superficial muscle (scalene, SCM) show EMG silence during craniocervical flexion (head on neck flexion)

Cognitive factors and mental stress may induce this problem, the muscle tension. Ongoing psychological stress may keep low-threshold motor units active more or less continuously

Stress level is related to pain severity. This means that the same muscle fibers may also be active during breaks at work and after work, unless the individual is able to relax mentally.

Vicious circles may start in muscle spindles during stress and repetitive work and may contribute to elevated muscle stiffness and dysfunctional coordination, including co-contractions. High concentration of inflammatory substances increase pain sensitivity. These pathological processes may spread from one muscle to another via nerve signals

So when you wonder how can you make your life successful.

Don't forget to add exercise in your everyday life.

In order to describe functional movement, there are two main muscular systems: the local and global muscular systems.

The local musculature system consists of muscles that are predominantly involved in joint support or stabilization, they are not movement specific, rather they provide stability to allow movement of a joint. Their activity is continuous and independent of the direction of movement.

The Global mobility muscles generate force to produce range of movement. They produce concentric acceleration of movement and high load shock absorption. Their activity is especially phasic (on:off pattern) and is direction dependent.

The segmental stability of the spine is dependent on the recruitment of these deep local stability muscles. The spine will fail if local activity is insufficient even if the global muscles work strongly

Coordinated action of local(segmental) and global stabilizers is needed. If local(segmental) stabilizers don't initiate contraction, the spine will be de-stabilized by global stabilizers and mobilisers.

Transversus abdominal as a local stabilizer: Activates prior to movement of the limbs or trunk to increase stiffness and stability of the spine. Its activity is independent of the direction of trunk movement or limb load

Low back pain patients show a motor control deficit, delayed activation of transversus independent of the type or nature of pathology.

Concerning lumbar mutlifidus, there was found asymmetry of cross sectional area in back pain patients and its Dysfunction does not correct automatically when pain resolves & specific training can correct dysfunction and recurrence

Dysfunction in global stability muscles leads to Myofascial shortening which limits physiological and / or accessory motion, Overactive low load or low threshold recruitment and reaction to pain and pathology with spasm

While the etiology of musculoskeletal pain symptoms is multi-factorial, there is a general consensus about the beneficial effect ***of therapeutic exercise!!A systematic review on economic evaluations investigated the cost-effectiveness of conservative treatments for non-specific neck pain and they found that therapeutic exercise was the most cost-effective therapy for non-specific neck pain patients.***

So, we need to change our point of view and ….

Set specific Exercise goals! These must be:

- *Decrease neck and upper back pain area*
- *Improve muscle elasticity*
- *Improve muscle strength*
- *Achieve normal range of motion*
- *Improve functional ability in daily life*

The types of exercises that we suggest are:

- *Relaxation exercises*
- *Proper position's (sitting and standing) adaptation exercises*
- *Stretching exercises*
- *Strength exercises*
- *Functional exercises*

The progressiveness of these protocols could be as following:

First, relaxation techniques.

Next, perform positioning exercises.

Then, stretching exercises.

Simple strengthening exercises.

Then we combine stretching & strengthening exercises.

Finally we include more functional exercises

After relaxation we start with Segmental muscles. You should activate the segmental muscles so someone can tolerate the proper sitting or standing position for a period of time.

in order to perform positioning exercises (Segmental muscles) start from the Sitting position: Roll the pelvis forward to create a normal lumbar lordosis,

Lift the sternum, so the shoulders fall back into a neutral position.

Tuck the chin as if making a double chin and lift the head while maintain the chin tuck.

Hold for 10 sec and relax. Repeat.

Then, stretching exercises.

Start with Lateral neck flexors muscles' stretching

Sit properly.

Hold your upper back on the chair (your scapulas touch the chair).

Place your arm over your hand and touch with your hand the other side ear.

As you hold this position, bend laterally your head while you help with your same side arm pushing your hand to increase the stretch.

Feel a stretch on the other side of the neck. Hold it for 12 s.

Return to the initial position, and repeat to the other side.

FASCIA AND EXERCISE GO FIT

WHAT is fascia?

Fascia is a moist constituent tissue system !

It is a Connective tissue that connects various systems !

It helps connection and communication in the human body !

It moves and shapes us !

Its tensegrity structure is independent of gravity !

What is really interesting is its function?

Fascia is strolling under the skin!

How does it look like?

Fascia looks like a net, a net that is connecting organs and systems !

What does fascia need in order to stay healthy?

- ☐ *Release*
- ☐ *Rewire*
- ☐ *Rehydrate*

GO F.I.T.

This means that Exercise targeting fascia fitness is aimed to:

- ☐ *Elasticity store and release of energy because hard fascia is not responding to the movement appropriately! Working on storing and releasing energy, gives us more kinetic energy and that is what we exactly need for efficiency in movement!*
- ☐ *Viscosity, as better hydration*
- ☐ *Plasticity, ability to change shape and adjust to movement*

What about the Foam rollers?

- ☐ *There is some important evidence that exercise with Foam roller can release myofascia*
- ☐ ***But be careful! Not all the cases are the same!*** *when fascia is too tight and FR is applied, then fascia doesn't respond and pain is more severe and that pain is reflected to many anatomical regions!*

What is your GOAL in chronic pain patients! What can you expect?

How fast your patients will be improved?

Fascia responds to the nervous system immediately but it takes months for fascia to remodel, more than 6 months. For chronic pain patients the exercise has to produce their own antiflamatory and reduce pain sensation, in order to get used in that state or ease the pain. There is a need for gentle practice for relieving the pain in order to rewire the body in a way that it gets used being in less pain and aiming to neural pathway of pain.

<u>In Conclusion</u>

Whole body movements engaging long myofascial chains is the best way to train fascial system!

We need bouncy sensation -play and flow in movements!!! (e.g yoga does that partially because poses are held) but we need bouncy sensation and play with flow movements!

Any soccer players could be a dancer and the opposite! They both need whole body flow movement!

FITNESS OVER FATNESS – SEDENTARY BEHAVIORS

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Important parameter: Physical fitness

Physical inactivity and health…

"Physical inactivity and low fitness is perhaps the most important predictor of morbidity and mortality that we know of. Low fitness accounts for more sickness and deaths in the population than anything else that we have studied"

- Dr. Steve Blair

Recent literature findings suggest a paradigm shift from the need to reduce fatness and BMI rates to the improvement of fitness levels. Such a necessity is supported through large epidemiological studies where fit individuals show direct links to mortality reductions (Figure 9; Barry, Baruth, Beets, et al., 2014). Such an improvement is attributed to increased levels of physical activity and fitness levels as regular physical activity decreases the risk of metabolic conditions (such as Diabetes type-2). Simple mechanics are revealed (i.e. IL-6 and IL-10 provoked by exercise, exert direct anti-inflammatory effects by an inhibition of TNF-a and by stimulating IL-1ra), having a direct impact on glucose and lipid metabolism (Pedersen, 2017). The opposite has been also proposed as inactivity has been linked to significant physiology malfunctions due to chronic inflammations leading to increased morbidity and mortality.

Increased physical activity diminishes the risk of illness in every human being

For a good level of health we do need to reduce body weight if any individual is sufficiently physically active

Why does this happen?

- *Proteins secreted during physical activity*
- *Powerful anti-inflammation action*
- *Reducing metabolic risk factors*
- *Better health*

What do we need to know as practitioners?

- *A need for a new public message: from losing weight to move more and get fitter!*
- *When it comes to physical activity: anything is better than nothing!*
- *Human system knows its best and just needs the opportunity to achieve it!*
- *Creating an excuse to walk further can have a long list of positive impacts*

Sedentary behaviour and health-Based on various epidemiological data

Does exercise make a difference?

What do we need to know as practitioners?

- *We need to inform the public about the toxic effects of sedentary behaviours especially when they are combined with lack of exercise and inactivity;*
- *At least: 5' break every 60' of sedentary behaviour;*
- *Creating opportunities for more active endeavours and reducing TV viewing can be an important step forward;*
- *Frequent brakes and increased fitness levels can have an important impact for improving health at all ages!*

Dieting and Mortality

Based on various studies there is ample information to suggest that repeated dieting is linked to increased mortality. Various metabolic and hormonal responses may result in chronic body weight instability (weight cycling or ''yo-yo dieting''), which has been linked to enhanced weight gain, insulin resistance, dyslipidemia, hypertension, and increased cardiovascular and all-cause mortality (Montani, Schutz, & Dulloo, 2015). Those dieting efforts are also linked to particular population groups that could enter in a vicious weight cycling contributing to metabolic conditions and increased risk of mortality (Figure 1).

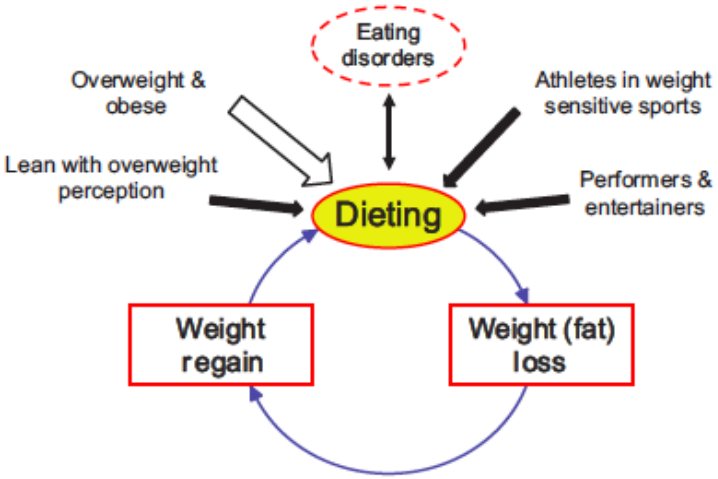

Figure 1. *Typical dieting groups and their risk of weight gain leading to increased mortality as a consequence (Mortani, et al., 2015).*

Dieting and health indices

Various studies and meta-analysis have already doubted the positive effects of dieting on critical health indices such as Diabetes, Cholesterol, Triglycerides and Hypertension (Tomiyama, Ahlstrom, & Mann; 2013) with certain confounding factors (i.e. exercise, increased consumption of fruits and vegetables) being more likely to correspond to positive health effects in association to lifestyle factors. Additionally, being overweight and obese (up to 35 > BMI) does not link to increased risks of morbidity and mortality (Flegal, Kit, Orbana, & Graubard, 2013) suggesting a detachment between weight loss efforts and potential health outcomes especially when lifestyle factors (like regular exercise and improved quality of food consumption) are in the focus of interventions aiming to improve health indices.

Food Labeling

With the aim to protect the consumers' health and interests by providing a basis for informed choices over food safety and use of food European Union has established standards of food labelling and relevant information. The aim is to pursue a high level of protection of consumers' health and interests with particular regard to health, economic, environmental, social and ethical considerations. Additionally, food information laws aim to achieve in the European Union the free movement of legally produced and marketed food, taking into account, where appropriate, the need to protect the legitimate interests of producers and to promote the production of quality products.

Such labelling covers all food that is sold to the consumer directly as well as food sold to cafes, restaurants and other catering establishments. It is also controlled by law so it is accurate, not

misleading and safe to consume (Official Journal of the European Union, 2011). An example of the new legislation includes the traffic light scheme on food labelling that has shown already positive effects on consumption of more healthy food types (Thorndike, Riis, Sonnenberg, & Levy, 2014) (Figure 2).

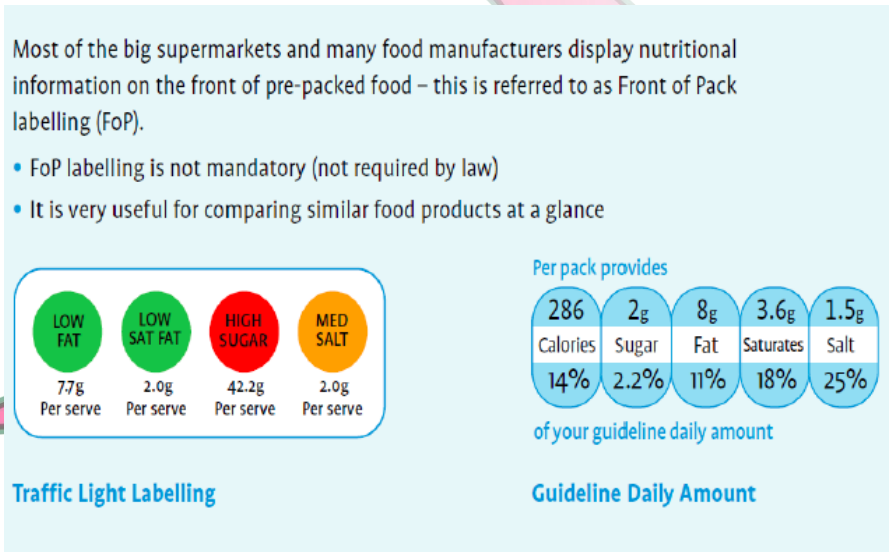

***Figure 2**. Examples of food labeling based on European Union laws.*

Other important information on critical values can be found in relevant health promotion sites (Food Labels, 2018) promoted by large health organisations like UK National Health System articles (Table 1).

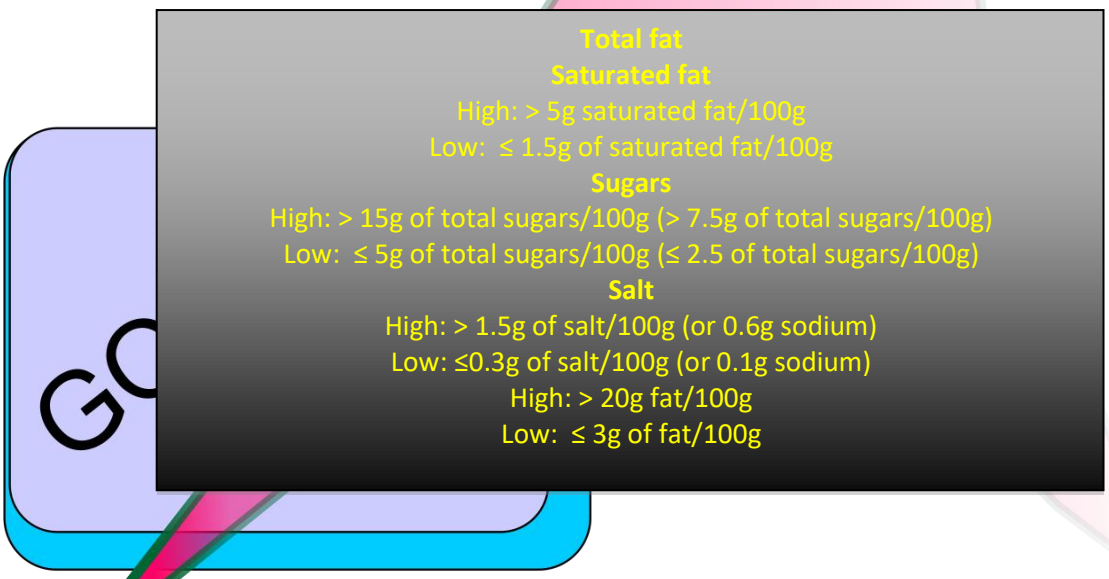

***Table 1.** Critical values of nutrients per 100gr. (Food Labels, 2018).*
(In brackets are the new more strict levels of ingredients to be proposed soon)

SELF- MYOFASCIAL RELEASE WITH FOAM ROLLERS AND OTHER SPECIALIZED SELF-MASSAGE TOOLS DURING HEALTH TOURISM

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Exercise program for Tourists with or without musculoskeletal disorders

When designing a program for an unknown team of persons (like tourists are) it must be taken into account that the program should be adequate and effective for different target groups, of different ages, musculoskeletal condition, athletic level etc. At the same time an exercise program for tourists has to combine effectiveness with relaxation and fun since they are on holidays and they have the need to escape from their usual routines and entertain themselves in all circumstances, even during an exercise session. An exercise program that appears suitable to accomplish all previous goals is self-myofascial release (SMR) with foam rollers (FRs) (or other SMR tools) since it is effective, relaxing and entertaining and it is also expected to be something new at least for the majority of the tourists.

SMR: its aims and its effectiveness

SMR is a self-massage technique that derives from the concept of myofascial release. Myofascial release is a whole-body, soft tissue therapy technique which through the application of pressure by the hands of a manual therapist in the myofascial tissues facilitates a stretch into the restricted fascias and elongates and soften the tight connective tissues (Barnes, 1997; Paolini, 2009; Weerapong et al., 2005). By extension, SMR works under the same principles as myofascial release (MacDonald et al., 2013) and has similar goals but in this case the pressure in the tissues is exerted by the individuals themselves using specialized devices like FRs, roller massagers and various types of small balls. Both techniques aim to treat myofascial restrictions that are due to connective tissue tightening.

Connective tissue tightening comes as a result of overuse and overactivity of the myofascial tissues (due to poor posture, repetitive movements, imbalanced training etc) (Behara & Jacobson, 2017; Clark & Lucett, 2011). This overactivity gives rise to recurrent microtrauma which in its turn creates inflammation. Inflammation initiates a protective mechanism, increasing muscle tension and

causing muscle spasm. As a result of the spasm, adhesions begin to form in the soft tissue (Clark & Lucett, 2011). Adhesions (which are also known as "knots", "hot spots", "trigger points", "tender points") are defined as "dense, hypersensitive areas found within a palpable taut band of muscle tissue" (Aboodarda et al., 2015; Kantelborn, 2006; Penney, 2013). These adhesions can be active or latent but in all cases form a weak, inelastic (unable to stretch) matrix that decreases normal elasticity of the soft tissue (Clark & Lucett, 2011; Paolini, 2009). The clinical signs and symptoms of these trigger points are restricted range of motion, pain and muscle weakness due to pain (Cagnie et al., 2013).

Given all these, the primary goals of SMR are to: a) inhibit the overactivity of the myofascial tissues and b) soften the shortened and release the hypertoned myofascial tissues (Clark & Lucett, 2011). This is achieved through the breaking of the myofascial adhesions using pressure (Weerapong et al., 2005). The reduction of myofascial adhesions then leads to alleviation of muscular tension (Kalichman & Ben David, 2017), pain reduction (Barnes, 1997; Kalichman & Ben David, 2017), correction of muscle imbalances (Bushell et al., 2015), reduction of functional limitations of the musculoskeletal system (Boguszewski et al., 2017), functional improvement (Barnes, 1997) and restoration of tissues elasticity previously inhibited by the presence of the adhesions (Penney et al., 2013).

There are also many scientific researches that have documented statistically significant increases in flexibility (either acutely or chronically) after treatments with FRs or Roller Massagers in various muscle groups of the lower limbs like the hip flexors (Bradbury-Squires et al., 2015; Cheatman et al., 2017; Mac Donald et al., 2013; Marcovic, 2015), the hamstrings (Boguszewski et al., 2017; Junker & Stöggl, 2015; Marcovic, 2015; Mohr et al., 2014; Sullivan et al., 2013) and the ankle prantarflexors (gastrocnemius and soleus) (Daskalaki, Malliou, Beneka, Gioftsidou, Bebetsos, 2018; García-Gutiérrez et al., 2017; Halperin et al., 2014; Kelly & Beardsley, 2016). As it is pointed out in a recent meta-analysis these effects in most of the researches remain statistically significant up to 10 minutes (Cheatman et al., 2017), but in the more recent research by Daskalaki et al. (2018), that examined the effect of a treatment with a FR in the flexibility of the ankle plantarflexors, the increases in ankle ROM were more pronounced in relation to previous researches and remained statistical significant for 20 minutes. In any case the beneficial effect of SMR in the increase of flexibility is well documented.

Techniques of rolling

As for the technique of rolling, two of the most common myofascial techniques include either exerting pressure while rolling back and forth (Bushell et al., 2015) in a slow and melting pace in order to provoke tonus decrease (Schleip, 2003) or sustaining the pressure (Barnes, 1997) in painful areas also known as "trigger points", "hot spots" or "knots" (Kantelborn, 2006; Penney et al., 2013) since the compression of trigger points is believed to release them leading finally in an increase of flexibility (Junker & Stöggl, 2015; Penney et al., 2013).

How much pressure to exert

The pressure that will be exerted depends on a combination of the type of roller, the body-weight of the subject, the modification of the exercise and the instructions given. Previous instructions in scientific researches include: a) "as much force through the roller as possible" (Kelly & Beardsley, 2016), b) "pressure equivalent to a pain level of 7 out of 10" (Halperin et al., 2014) c) "an amount of pressure that provokes a sustainable and not intolerable amount of pain/discomfort" (Daskalaki et al., 2018). All these instructions were effective in provoking an increase in flexibility. In a recent research (Grabow et al., 2017) that compared the impact of different intensities of rolling forces (50-90% of maximum discomfort) in the flexibility of quadriceps during a treatment with a Roller Massager it was found that rolling forces do not substancially amplify ROM so it is suggested to roll a below a level of significant pain or discomfort.

Duration of SMR

According to the theory, recommended durations of SMR and FR start from 30–60 seconds (Kaltenborn, 2006) and last as long as five minutes (Paolini, 2009) per muscle or until a release is felt (Couture et al., 2015; Paolini, 2009), while it is also discussed that greater durations could probably lead to greater gains in flexibility (Bradbury-squires et al., 2015; Monteiro et al., 2017; Murray et al., 2016; Skarabot et al., 2015).

The above-mentioned guidelines concerning durations are recommended only in case that the goal is the enhancement of flexibility and could be applied to the recreationally active population. In case FRs are used by athletes these durations are adequate for cool down but concerning warm up they would definitely need revision in order to not influence in a negative way the performance of the athlete.

Pace

A slow and melting pace is advised in order to induce parasympathetic state and for muscle tonus decrease (Schleip, 2003). So, the user should roll the device slowly over the muscle treated, if the goal is to break myofascial adhesions, alleviate muscular pain and/or to enhance flexibility.

What muscles to treat?

SMR could be used either locally targeting one group of muscles or globally for a whole body treatment. However, it is advisable not to treat only isolated muscles but muscle chains.

When to perform SMR?

SMR can be performed anytime during the day (for healthy subjects). When exercising it can be performed as a complementary method during warm up or as recovery and cool down. For the increase of flexibility it has been proven more effective the combination of FR with static stretching and it has been recommended that FR is executed before static stretching (Mohr et al., 2014).

CONTRADICTIONS

As it is proposed by Clark & Lucett (2011), anyone using SMR techniques should follow the same precautionary measures as those established for massage or myofascial release. As it is further advised by the same researchers, SMR should be cautioned or avoided by people with: healing fractures, febrile state, osteoporosis, phlebitis, acute rheumatoid arthritis, advanced diabetes, congestive heart failure, kidney failure or any organ failure (such as the liver and pancreas), contagious skin conditions, cancer (under certain circumstances such treatments should not be applied). For example, sometimes massage, pressure, or tension can damage tissue that is fragile from chemotherapy or radiation treatments.

Conclusion

SMR with Foam Rollers (FRs) and/or other devices is an ideal intervention for the general and athletic population. Concerning specifically the tourists, FRs could help them relieve the multiple musculoskeletal areas of stress that have possibly been accumulated during the entire working year. At the same time, by teaching the tourists on how to individually perform SMR, the sessions will be beneficial for them not only at present but also to the future, since they will gain the knowledge on how to perform SMR during the entire year without supervision. However, in case of musculoskeletal dysfunctions they will have to consult their physician, in order to perform unsupervised SMR.

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NOTES ON LEADING AND MANAGING CHANGE

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Introduction

The following document explains in detail the content of 'Leading and Managing Change in the Tourism and Hospitality Industry', analysing each slide in a separate section and offering illustrative examples. This document aims to help trainers in hospitality and tourism organizations, and in other organizational settings at large, to lead and manage change both for the guests (i.e. customers) to go fit, adding exercise and good nutrition habits to their lives, but also for the people that trainers work with (e.g. supervisor, subordinates, team members, etc.). In summary, the presentation can be used for both cases, since a number of issues raised and recommendations made when discussing change management are similar for guests and employees. What is important to highlight is that any change management situation is a process with different phases that should put people at its centre at all times. A people oriented approach will help trainers to promote the desired changes to the targeted audience (guests or employees), communicate the need for change to them, convince people to take part in it as early as possible and finally support them in many ways at different stages.

Context-Sensitive Approach to Change

A context-sensitive approach to change suggests that there is no one size fits all approach when it comes to interacting with people. Each guest has a unique personality, values and needs and thus, the approach the trainer adopts needs to take that into an account. For example, a trainer could apply the same training principles to two different guests with different results, based on the different personalities of the guests.

If dealing with an organizational change, the trainer has to take into account the type of change that will be introduced to the organization (e.g. dramatic, big scale, etc.) and develop an appropriate implementation strategy.

The timing and sequence of decisions is of great importance for both cases (guests and employees), so that the change outcome is the desired one.

Key Challenges

Leading and managing change is a challenging process, and the change agent (i.e. the trainer leading and managing the change) needs to be aware of three main challenges:

- *Any change process involves not only learning something new, but unlearningsomething that is already present. This can be a habit that a person may be having for a very long time, for example not exercising at all. Convincing a person to change a habit and unlearn what has been known for years can be very difficult.*
- *No change will occur, unless there is motivation to change, which means that people need to find a motive in order to be part of the change. When a change is proposed to people, they ask: 'what's in it for me?', so we need to be ready to answer this question, in order to convince people to participate in the change initiative.*
- *Organization changes such as new structures, differenttraining processes, reward systems, and so on, occur only through individual changes in key members of the organization. This means that if we want to change parts of the organization, we should start by focusing on what each individual has to do, so that the change is successfully introduced.*

Change management style

There are two basic change management styles, a directive and a persuasive management style. When deciding the change management style, a trainer needs to adopt, a number of parameters need to be considered. A more directive style of change management would be appropriate when there is an urgent situation or crisis. The life of the guest could be in danger as an example, because of weight, life style, lack of exercise and nutrition habits. Another example could be a guest being already dissatisfied with the current situation and thus, committed to change. The change agent, who is the trainer in this case could be quite knowledgeable and able to convince the guest for the strong benefits of the proposed change. A more persuasive style would be most appropriate when there is no obvious crisis and thus, the guest is not so committed to change yet. It could be the case that the change and the relevant benefits are not very clear to the guest or appear to be quite complex. The receptivity to change of the guest is very important as well, as there are people that are more open to change and others that find it more difficult to change.

Adoption curve

As it has already been suggested, leading and managing change is a process, which consists of different stages guests could go through, in order to adopt a specific change. These stages are presented below in detail.

Stage 1: Awareness

The guest becomes aware of the need for change. Old routine(s) and habits are challenged with new routine(s) and habits. For example, different nutrition habits are proposed or new training exercises are discussed.

Stage 2: Interest

For example, the guest becomes curious about the change and its benefits, is open to new information and starts asking relevant questions.

Stage 3: Trial

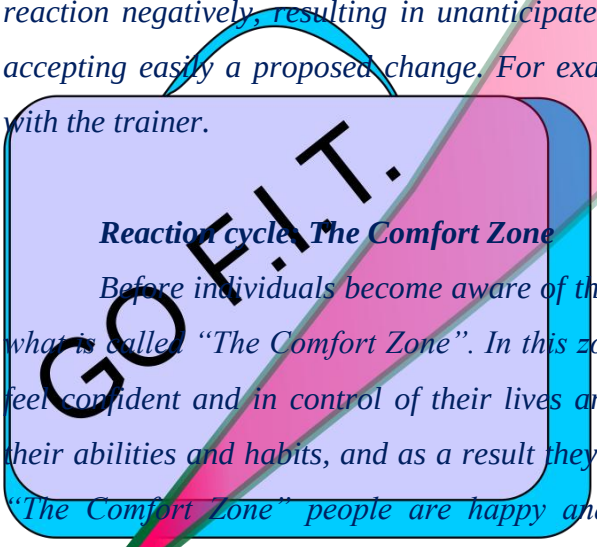
As an example, the guest begins to experiment with the proposed change, assesses the costs/benefits of the change and potential future success. For example, the guest could start experimenting with particular training exercises and new equipment or different nutrition habits.

Stage 4: Adoption

The guest finally adopts the proposed change(s). For example, she/he replaces old routine(s) with new routine(s) and become advocate for the change initiative. If the proposed change is a dramatic one, this could take time of course, and the guest may at some point regress to an earlier stage.

Reaction cycle

It is very important for the trainers to bear in mind that a change management process is highly emotional, so they should be able to understand the emotions that the guests go through, in order to be able to support them. Individuals that resist change have usually developed a psychological barrier to change, causing them to go through a reaction cycle, which affects their reaction negatively, resulting in unanticipated hidden costs, such as wasting valuable time or not accepting easily a proposed change. For example, a guest could be quite negative in cooperating with the trainer.



Reaction cycle: The Comfort Zone

Before individuals become aware of the need to change anything in their lives, they reside in what is called "The Comfort Zone". In this zone, people reside primarily emotionally, because they feel confident and in control of their lives and work. For example, guests, could feel confident of their abilities and habits, and as a result they feel capable of handling whatever situations arise. In "The Comfort Zone" people are happy and comfortable with the way things are and do not anticipate any changes to occur. It can be challenging to move guests away from their comfort zones.

Disruption in the Comfort Zone

The first step in the change management process is to cause disruption in the comfort zone. This could mean that the guests, for example, are informed of the benefits of exercise and good nutrition habits, receiving information that was unknown to them. The need for changing training methods and nutrition habits is communicated and people are asked to use new processes. This could result in them, loosing confidence when "the way we've always done it" gives way to something new and unknown.The guests may emotionally then move to "The No Zone", in which they experience quite negative emotions, such as avoidance, confusion, fear and even blame.

Reaction cycle: The No Zone

"The No Zone" is the most difficult and delicate phase, so the guests should not remain there for a long time. The reason is that they may feel psychologically paralyzed at the news of the proposed change in their lives. Their shock immediately affects their performance, so as an example, they may enter a stage of denial and loose the desire to collaborate altogether. People may become angry and unable to manage their anger. Their resistance may be passive in the form of avoiding trying any new approach or aggressive in the form of sabotaging every effort. "The No Zone" is the common reaction of people who face departure from their comfort zone. The "No Zone" is the beginning of the end of the way things always have been and is characterized by several reactions. Typical emotions include for example: anger, frustration, anxiety, because of the new unknown situation and possibly irritation that may make people aggressive. The guests may also become depressed and detached, stopping any effort and experiencing lack of energy.

Disruption in the No Zone

Once guests realize that they can't go back and that they have to change to a bigger or lesser extent for their benefit, then they are ready to move from "The No Zone" to "The Gap Zone". In this zone, the guests are not convinced yet and they haven't adopted the proposed change, but at least they are not that negative or reactive to change any more. What they need now is a clear direction and more information for the new situation and the benefits of the proposed change. The trainer now has the responsibility to lead people through this phase, giving them a clear direction, encouraging them and providing feedback.

Reaction cycle: The Gap Zone

*In **"The Gap Zone"** people wonder "How do I fit in this picture?". The trainer needs to be able to address this question or encourage the guests to reflect on what is happening, so that they can address this question themselves. The guests now need to discover their own view about how they are a part of things and understand their role in the change, what they need to do, so that the*

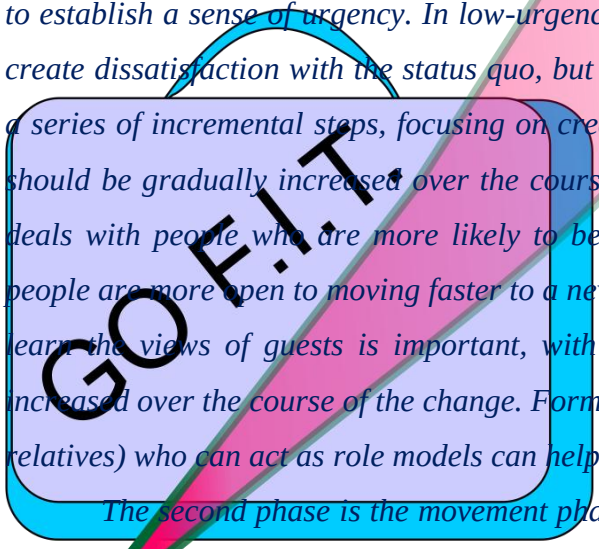
change is successfully implemented. A clear vision of the new situation can help the guests in this phase, as they are not ready and committed yet. Guests may be found to bargain and seek opportunities to reach out to trainers and other guests for dialogue, as they are still struggling to find meaning in this.

Reaction cycle: The Go Zone

Ideally, some guests will move to "The Go Zone", in which a momentum toward the future has been reached. While not everybody will reach the necessary stage of acceptance, those guests who get truly on board, now are excited about the possibilitiesand options the new situation can offer. Communication and feedback on their progress is very important to keep motivation and engagement of guests high. If guests have enough time and are given some help in working through the previous stages, they eventually come to a feeling of acceptance with a certain degree of expectation and make new ambitious plans. They feel secure and possibly empowered with a stronger sense of self-esteem. It is important to note that people will go through this cycle at varying rates and their reactions will be dynamic, so there is not a steady progression.

Kotter's 8 Steps

Kotter's 8 steps of managing change are developed for organizational change, but are very useful when considering individual stage as well. There are three important overall phases, suggested in this model. The first phase is the mobilization phase, in which the trainer unfreezes the current situation and creates disruption in the comfort zone of guests. In this phase, the trainer tries to establish a sense of urgency. In low-urgency contexts, the trainer has to do a much harder job to create dissatisfaction with the status quo, but possibly has the luxury of time to implement changein a series of incremental steps, focusing on creating minimum disruptiveness at the beginning, which should be gradually increased over the course of the change. In high-urgency contexts, the trainer deals with people who are more likely to be dissatisfied with the status quo of their lives. These people are more open to moving faster to a new order of things. Communication early on, in order to learn the views of guests is important, with a focus on creating disruptiveness, again gradually increased over the course of the change. Forming a coalition with people near the guest (e.g. friends, relatives) who can act as role models can help further to increase the commitment of the guest.



The second phase is the movement phase, during which the change occurs. Creating a vision together with the guest rather than imposing anything on the person and communicating systematically the benefits of the change can be really useful. Empowering the guest with short term wins by setting small goals can further motivate people to become active on their vision.

The final phase is the phase during which, the guest makes the change part of her/his life and is fully committed to succeed. The guest is taken to a new comfort zone, in which she/he feels confident again.

Common Change Management Pitfalls

This matrix explains nicely what needs to be put in place, so that change is successfully implemented. A clear vision, necessary skills which can be gradually developed through training, the right incentive, appropriate resources, such as training equipment and a clear action plan can lead to a successful change. If the vision is missing, then there is initial confusion in the guest. If the necessary skills, for training as an example are not acquired, then anxiety may be caused in the guest. If incentives are not clear, then the change may be implemented or accepted, but very slowly. If resources are missing, such as training equipment, this can cause frustration. Finally, if a clear action plan is missing, this is a false start.

PHYSICAL ACTIVITY AMONG TOURISTS

Morten Fredriksen, Kristiania University, Norway

Who said that holidays should be relaxing?

A tourist region pilot study ('Heidiland aktiv') is used to illustrate the potential limitations of intervention projects: though a promising counselling system was developed and put in place it was not possible to develop an effective approach to the tourists and to generate sufficient interest in the issue to justify a full scale outcome study. These experiences from Switzerland show that behavioural change in previously inactive individuals is possible and that the general practitioner in particular can play an important role in this process. Expectations concerning the size of the intervention effect have to be realistic. Promotion of health enhancing physical activity remains a challenge.

Active vacation

What we like

Most important activities when choosing a destination

- *Hiking (30%)*
- *Training (14%)*
- *Cycling (9%)*
- *Diving (6%)*
- *Water sport (5%)*

GO FIT

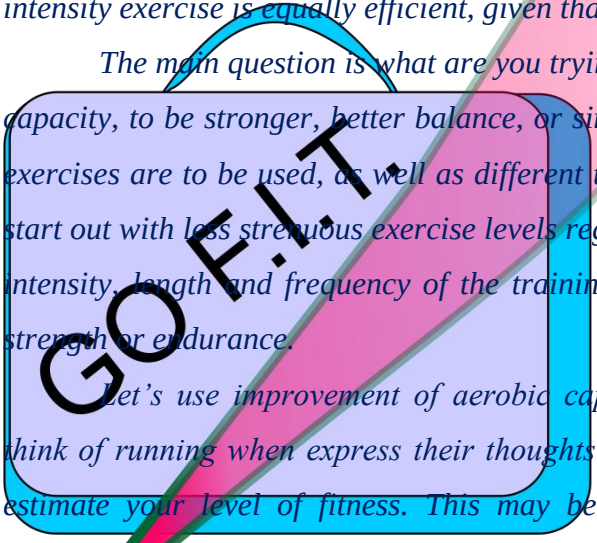
The effect of physical activity on health is undisputed. A wide range of positive health effects have been established through empirical data and scientific studies across decades. The concept physical activity is often expressed in several ways, and needs some clarification. Physical activity is all movement, planned or unplanned, demanding more energy expenditure than the basal metabolism. Usually the concept physical activity level is divided in to sedentary, light, moderate, vigorous, and sometimes also very vigorous. This may be measured using accelerometers or, the more frequently used, heart rate. Heart is, as opposed to accelerometers, a physiological measure and hence; give more health related information.

However, often people confuse the concept physical activity with fitness. Fitness is measurement of different physical traits within a person. The concept fitness usually includes a ceiling effect, hence a person's maximal achievement within several different traits as strength, aerobic capacity, flexibility, agility, running speed, and so forth. To be fit usually means that a person excel in one or more of these traits. The traits are either measured as performance or as a capacity. Performance refers to measurement using easy to use instrument, for instance running ability measured using a time trial (minutes and seconds). Hence; a performance measures does not include any physiological measure, it is an "external" measure of an physical function. Capacity, on the other hand, refers to physiological measures, hence; an "internal" measure which gives more health related information. For instance measuring endurance ability using oxygen uptake.

The concept exercise usually incorporates all intentional physical activity. Exercise has a purpose of increasing one's fitness in one or more traits. Most people think of exercise when they want to become fit, however, general physical activity do have a profound effect on health. In many cases the advice to a person with limited physical capacity may be to do more physical activity in daily life, and not focus on exercise. Exercise may become more actualized when the fitness level is increased.

When people plan to do exercise they often tend to think about running. In addition, running at a high intensity. If a person have low working capacity will running at any speed be at a high intensity. Often this leads to exhaustion in each session, and the motivation drop to a point that they give up. It is a common misunderstanding that high intensity (High Intensity Interval Training, HIIT) is the best exercise modus to increase one's fitness level. Numerous studies have shown that low intensity exercise is equally efficient, given that the exercise time is longer.

The main question is what are you trying to achieve? Are you trying to achieve better aerobic capacity, to be stronger, better balance, or similar goals? Depending on the goal, different types of exercises are to be used, as well as different types of intensity levels. A common rule of thumb is to start out with less strenuous exercise levels regardless of type of exercise, and gradually increase the intensity, length and frequency of the training. In most cases people either want to improve their strength or endurance.



Let's use improvement of aerobic capacity as an example, as many people automatically think of running when express their thoughts about "getting in better shape". Firstly, you have to estimate your level of fitness. This may be done by tests, however, most people have a good impression of their fitness level. Secondly, you have to find an exercise you enjoy. This is very important, without joy no one will last in their exercise. Thirdly, you should set your goal. If your goal is to go from totally untrained to less untrained, HIIT is not the exercise modus to use. HIIT is a

more advanced exercise form, and should be used for people at a working capacity. HIIT is effective for aerobic training and to train the central blood distribution system, namely the heart. However, you should go through a medical check-up prior to the HIIT-training if you are untrained. Low intensity aerobic training is, on the other hand, a far more safe and less strenuous form of exercise, and is the preferable type of exercise to be used in untrained individuals. You will find that low intensity exercise demands less preparation, and will not strain your motivation as HIIT training will do.

Experience tells us that people who are less prone to exercise or to be physical active often, not always, are the same persons who are less eager to live a healthy lifestyle. In these cases overweight may be a problem, and this being a global problem, and weight loss is the major concern. This leads to the core of the challenge with physical activity, fitness and exercise. Many believe exercise and physical activity is the most important tool in weight loss. However, studies have shown that calorie restrictions are far more efficient than exercise in weight loss programs. A common saying is that "diet take the kilos, exercise take the grams". However, a large work load over time, as several hours across several days, will also have a significant impact on the weight. But in ordinary people's lives a reduction of calorie intake would always be the main factor in a weight loss regime.

Despite the limited value in weight loss, physical activity has a value in itself. Several physiological and health related factors may be positively affected by physical activity. Physical activity is the most efficient free of charge "medicine" in the world, easy assessable worldwide, and numerous studies have shown its effectiveness on various health variables. This is not limited to strenuous activity level or planned exercise, ordinary everyday exercise seem to have significantly impact on lifestyle related illness. You may bring it along with you wherever you go – so Go Fit!

The following factors will occur in your body if you are physical active – guaranteed!

Increased working capacity

The working capacity may be defined as the persons maximal physical capacity. Usually this is defined as a person's aerobic capacity measured using maximal oxygen uptake. However, working capacity is also dependent on strength, speed, flexibility, and so forth. Studies have shown that the main factor for preventing cardiovascular diseases is a high aerobic capacity. Being untrained, any physical activity will enhance a person's working capacity. There are several factors determining working capacity, both central and peripheral. The peripheral factors are number of capillaries in the muscles, number of mitochondria, number of red blood cells, number of haemoglobin, and so forth. The central factor is mainly limited by the size of the left ventricle in the heart, the larger

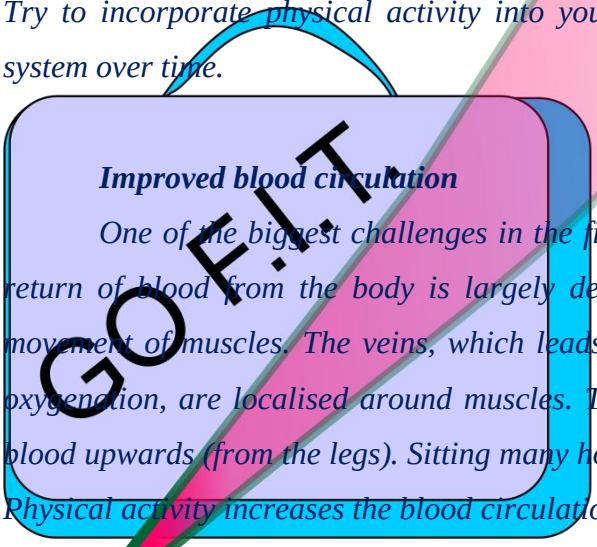
volume the better ability to pump large amounts of blood. The heart rate is both genetically and age dependent, as the heart rate drops with increasing age.

Improved well-being

Physical activity, preferably activity you like, will make you feel better. The body is designed to move, and the feedback system from our body to our brain give us a feeling of wellness when being physical active. Daily physical activity may improve your mood in general with the release of "feel good" hormones (Dopamin, Serotonin, Oxytocin, Endorfin). In addition, physical activity in moderate amounts may improve your creativity, which again will improve your well-being.

Improved immune system

The immune system helps you stay healthy and protects you against virus-, bacterial- and mycoplasma-infections. If you exercise regularly, there's a good chance that you're helping to your immune system. Studies have suggested that if you have moderate exercise a few times every week, you can drastically reduce the number of colds that you get every year. Exercise provides a boost to the cells assigned to attack causes of infections. These cells work more slowly in people who don't exercise than in those that do. However, despite that this boost only lasts for a few hours after you exercise, it's often enough to help keep you healthier than you would be if you didn't exercise. You don't have to be a super athlete to improve your immune system through exercise. All you need to do is walk for a half hour every day or exercise at the gym a few times every week. Studies have shown that people who are physical active often take half as many sick days per year as those who are not. Try to incorporate physical activity into your daily life routine to help strengthen your immune system over time.



Improved blood circulation

One of the biggest challenges in the fight against lifestyle related diseases is inactivity. The return of blood from the body is largely dependent on gravity (from head and arms) and from movement of muscles. The veins, which leads deoxygenised blood back to the heart and lungs for oxygenation, are localised around muscles. The use of muscles squeezes the veins and presses the blood upwards (from the legs). Sitting many hours a day may lead to oedema around ankles and feet. Physical activity increases the blood circulation in legs, and regular activity will improve circulation all over the body.

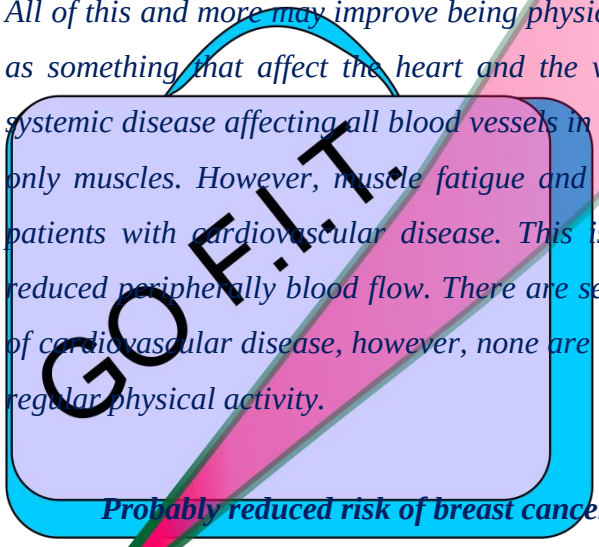
Reduced risk of high blood pressure

Permanently increased blood pressure is known to cause cardiovascular disease like stroke and arteriosclerosis. During physical activity, especially during endurance activity as walking, running, biking, and so forth, muscles are in demand for more oxygen. The increase in activity sends a signal from muscles, joints and ligaments to the circulatory system to increase cardiac output (stroke volume x heart rate) and sending more blood (and oxygen) to working muscles. The increase in cardiac output are detected by baroreceptors in aorta and arteries ascending to the brain. To regulate the blood pressure during exercise some blood vessel constringent and other dilate. During physical activity the blood pressure may increase, however, the blood pressure drops shortly after exercise, and last for several hours. In addition, regular physical activity causes the mean blood pressure to drop permanently to healthy levels.

Strongly reduced risk of cardiovascular diseases

Two third of deaths and life threatening disability world-wide is due to cardiovascular diseases. Cardiovascular diseases includes numerous problems, many of which are related to a process called atherosclerosis. Atherosclerosis is a condition that develops when a substance called plaque builds up in the walls of the arteries. This build-up narrows the arteries, making it harder for blood to flow through. If a blood clot forms, it can stop the blood flow. This can cause a heart attack or stroke.

Reduction in blood pressure, improved blood circulation, increased number of capillaries, improved size of the left ventricle, and so forth reduce the risk of acquired cardiovascular diseases. All of this and more may improve being physical active. Cardiovascular disease is usually perceived as something that affect the heart and the vessels in the brain. But cardiovascular disease is a systemic disease affecting all blood vessels in the body, and thus also blood supply to all organs, not only muscles. However, muscle fatigue and shortness of breath are the first symptoms for many patients with cardiovascular disease. This is due to both reduced capacity in the heart and to reduced peripherally blood flow. There are several medications that may be used to reduce the risk of cardiovascular disease, however, none are as effective as a healthy lifestyle with healthy food and regular physical activity.



Probably reduced risk of breast cancer

Studies have shown that the prevalence of breast cancer increases with overweight and consumption of alcohol. There are now strong indication that physical activity may prevent reoccurrence of breast cancer.

Less back problems

Inactivity, and especially sitting for longer periods day after day, have been proven to increase the risk of cardiometabolic disease as heart attack and diabetes. Inactivity also reduce the circulation in the small muscles in the lower back, increasing pain. In addition, compression of the vertebra and intervertebral discus increase up to 50 % compared to standing. This increases the risk of acquiring lower back pain over time. Regular physical activity and especially small breaks in the sitting by standing and walking significantly reduces the chances of lower back pain. Regular rotations of the back and rolling shoulders also improve circulation in upper back muscles and neck, and may prevent stiff neck and also headache.

Reduced risk of osteoarthritis

Osteoarthritis (OA) is the most common chronic condition of the joints. OA can affect any joint, but it occurs most often in knees, hips, lower back and neck, small joints of the fingers and the bases of the thumb and big toe. In OA, the cartilage breaks down, causing pain, swelling and problems moving the joint. In the final stages of OA, the cartilage wears away and bone rubs against bone leading to joint damage and more pain.

Physical activity may reduce the risk of getting osteoarthritis. Being physically active can also delay the onset of arthritis-related disability and help people with arthritis manage other chronic conditions such as diabetes, heart disease, and obesity. Learn how you can increase your physical activity safely. If you have arthritis, participating in joint-friendly physical activity can improve your arthritis pain, function, mood, and quality of life. Joint-friendly physical activities are low-impact, which means they put less stress on the body, reducing the risk of injury. Examples of joint-friendly activities include walking, biking and swimming.

*There are some simple advices people with arthritis should follow for safely being physical active - The **SMART-tips**:*

- ***S**tart low, go slow.*
- ***M**odify activity when arthritis symptoms increase, try to stay active.*
- ***A**ctivities should be "joint friendly."*
- ***R**ecognize safe places and ways to be active.*
- ***T**alk to a health professional or certified exercise specialist.*

Reduced risk of osteoporosis

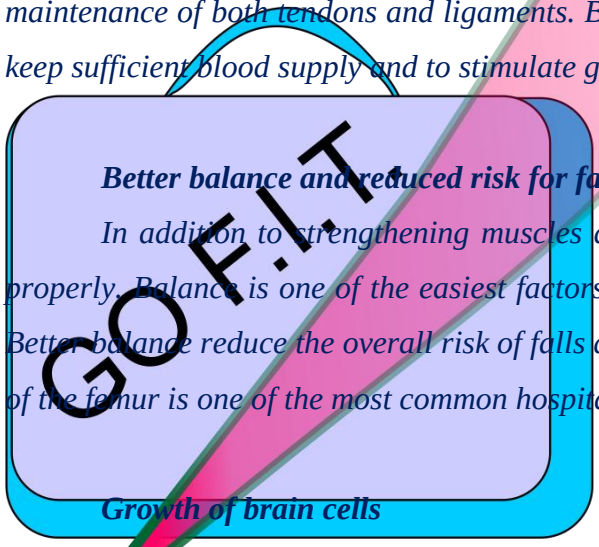
Osteoporosis is a disease with increased bone weakness that increase the risk of a breaking bones. It is the most common reason for a broken bone among elderly, usually the vertebrae in the spine, the forearm and the hip. Prevention of osteoporosis includes a good diet, physical activity, and fall prevention. Osteoporosis becomes more common with age and more so in women than men. Depending on definitions of diagnosis 2-8% of males and 9-38% of females are affected summering up to about 22 million women and 5.5 million men in the European Union in 2010.

Stronger bones, cartilage, tendons and ligaments

Physical activity as a way to grow stronger bones (and prevent osteoporosis) is based on evidence that it can regulate bone maintenance and stimulate bone formation including the accumulation of mineral. There are some suggestions as of how physical activity could be made more effective in increasing bone mass: 1) physical activity should be dynamic, not static; 2) exceed a threshold intensity; 3) exceed a threshold strain frequency; 4) be relatively brief, but intermittent; 5) impose an unusual loading pattern on the bones; 6) be supported by unlimited nutrient energy; and 7) include adequate calcium and cholecalciferol (vitamin D3) availability.

Cartilage is dependent on the variation between weight load and off-load in a dynamic and regular manner. Cartilage does not have any nerve endings, nor does it have any blood supply, thus the only way to nurture cartilage is on- and off-load of weight bearing. Exactly how dynamic physical activity works.

With age, tendons tends to weaken, and physical activity give the incitement to growth and maintenance of both tendons and ligaments. Both structure must have regular stretch and activity to keep sufficient blood supply and to stimulate growth-



Better balance and reduced risk for falling

In addition to strengthening muscles and bones, physical activity improves balance if done properly. Balance is one of the easiest factors to train, as it is low intensity and is easy to improve. Better balance reduce the overall risk of falls and thereby fractures. Fractures, especially the column of the femur is one of the most common hospitalisations causes in older age, especially in women.

Growth of brain cells

One of the most impressive changes due to physical activity is the growth of new neurons and synapsis in the brain. This has especially been shown in a part of the brain concerning memory, the hippocampus. The brain has, in common with the heart and liver, the ability to nutrition itself on

lactic acid. Lactic acid is produced during physical activity in the brain and muscles, especially in vigorous activity. During regular physical activity a growth factor called BDNF make the nerve cells growth, VEGF increases the number of capillaries and IGF-1 facilitates these processes.

Slower ageing

Physical activity have been shown to slow ageing in various ways. You do not have to be sick to benefit from physical activity, as you will with regular physical activity experience better concentration, that you are thinking faster, along with improved memory and better well-being. Strengthening of your heart and muscles also keeps you more agile and help you prolong life. Not only are your life prolonged, but you are more capable to take care of yourself during old age. The saying; "you are not only putting years to your life, you are also putting life into your years" is exactly what physical activity does.

Preventing depression

Hippocampus also affects our mood, and physical activity will make us feel in better mood by among other things release "feel good" hormones like Dopamine, Serotonin and Norepinephrine. Studies have shown that regular physical activity may have significant effect on preventing depression and relapse from depression.

Improved ability to cope with stress

Due to the above mentioned benefits of physical activity on your brain you are also coping more easily with stress. Stress releases "bad hormones" like adrenaline and corticosteroids which is important for survival in an "fight or flight" situation, but are unhealthy for your body in the long run. Physical activity at a regular basis may help you regulate these hormones better and also be used as a way to get rid of excessive and build up levels of these hormones due to stress.

Better lung function

The lungs are seldom the limiting factors for physical activity, unless you have asthma, are or have been smoking or have chronic obstructive lung disease. Sometimes a heart condition can give you reduced lung capacity as well. A restrictive and stiff rib cage may come as a result of ageing. Despite what the reason for reduced lung capacity, regular adjusted physical activity will always improve your lung condition. Also in healthy lungs physical activity will prevent and postpone natural ageing of the lungs, keeping you fit for the retirement period.

Stronger heart

Physical activity, especially HIIT, but also low intensity exercise, will improve your heart and prevent heart related diseases. The heart will not benefit as much in strength exercise, but anaerobic exercise will. Research have shown that it is the repeatedly exercise 3-5 times a week will give the maximal effect on the heart. However, any type of physical activity show an effect on an untrained person. The main effect is increase number of capillaries, more mitochondria, better blow flow, and increased enzyme activity. If exercising at moderate to high intensity regularly will have an effect on the size of the left ventricle. A larger ventricle drive more blood out to the body at each stroke, and hence; the heart can pump the same amount of blood at a lower heart rate per minute. This gives lower resting heart rate, which have been proven to prolong life and reduce the risk of cardiac diseases.

Strongly reduced risk of diabetes

Diabetes comes in two forms, the congenital Type 1 and the acquired Type 2. Type 1 is managed by life-long daily use of insulin and a healthy diet and proper amount of physical activity. Type 2 diabetes is what earlier a disease only found in older people, however, due to a sedentary lifestyle and excessive overweight/obesity, this disease is now visible also in children and adolescents. Type 2 diabetes may lead to premature death by cardiovascular death or also premature and disabling stroke. In addition to a healthy diet, avoidance of overweight/obesity, regular physical activity is essential to avoid Type 2 diabetes. As little as 30 minutes a day, may prevent you from illness.

Strongly reduced risk of colon cancer

Several biological mechanisms have been proposed to explain the association between physical activity and colon cancer; many of these mechanisms also support the observation that intense activities are most protective. Physical activity increases gut motility, enhance the immune system, decrease insulin and insulin-like growth factor levels, enhancing free radical scavenger systems and influence prostaglandin levels. Evidence suggest that lack of physical activity may cause colon cancer. It has been estimated that 12-14% of colon cancer could be attributed to lack of frequent involvement in vigorous physical activity.

Improved gastrointestinal function

Obstipation is a common illness among many people, and may be seen as a result of lack of physical activity. Food not passing through the intestines may cause pain and also illness. Physical activity, especially walking and running, and also other more vigorous activities improve mobility of the intestines, helping digesting food more easily.

More favourable fat metabolism and blood cholesterol profile

Cholesterol is essential in the metabolism of fat. Fat consists of triglycerides and after eating fatty food the glycerides are split up. Fat is no soluble in water, so it need help to be transported in the blood, and here is where cholesterol comes in. Cholesterol encapsulate the glycerides and transport it to fat depots or to working muscles/cells. Cholesterol is usually measured in 3 (4) ways. Total serum cholesterol indicates the total level of cholesterol you have in your blood. Total cholesterol is usually dived in to two, Low Density Lipoprotein (LDL) and High Density Lipoprotein (HDL). It also a lipoprotein called Very Low Density Lipoprotein (VLDL), but that is not commonly used as a measure, but incorporated in LDL. LDL is the cholesterol which transport the fat to fat depots, and is often referred to as the "bad cholesterol". HDL transport fat from the depots and to working muscles or other cells, and is called the "good cholesterol". The ratio between the 3 measures of cholesterol is what matter for cardiovascular diseases. We all have different levels of total-, LDL- and HDL-cholesterol, and it is dependent on genetic heritage, nutrition and physical activity. Large amounts of fatty food will increase total serum level and LDL/VLDL, and physical activity will increase HDL levels. People with a genetic predisposition for high levels of total serum cholesterol should reduce their consumption of fatty meals and increase their physical activity level. Likewise should people with overweight decrease fat intake. Physical activity will especially increase the level of HDL as HDL transport fat from depots, and are considered very important in the fight against cardiovascular diseases.

Stronger muscles

Muscles and brain follows the same order – "Use it or lose it". Muscles who are no used regularly lose their strength, their volume, their contraction speed, get fewer mitochondria, less capillaries and therefore less blood and oxygen supply. This lead to weakening of the muscles which only can be prevented by physical activity. Strength training will give growth of muscles, and you become stronger. Similar response do aerobic training give, especially for the untrained. In addition do aerobic training give several other benefits as reduced risk of cardiovascular diseases and diabetes.

Improved function in joints

A joint not used will stiffen and be useless due to reduced thickening of the cartilage and reduced mobility of the tendons and ligaments. Regular dynamic physical activity at full mobility range is a must for all joints in order to keep up functional body movement.

Better flexibility and mobility

In line with joint mobility is use of muscle in dynamic movement a necessity for flexibility and mobility. In older age loss of flexibility and mobility, along with reduced strength, are the main reasons for elderly need for help. Again, regular physical activity is the key for a long, autonomous and sustainable life at old age.

Better foundation for maintaining a healthy body composition

Physical activity is, together with a regulated and healthy diet, the main component in maintaining your body composition at a healthy level. When already overweight a healthy diet with less calories is the main factor for losing weight, however, in keeping your weight at a healthy level regular physical activity is equally important, along with all the other benefits mentioned.

Remember:

***"Those who do not make time for exercise will eventually have to make time for illness"** - Edward Stanley, Earl of Derby (1863)*

NOTES ON SOFT SKILLS DEVELOPMENT

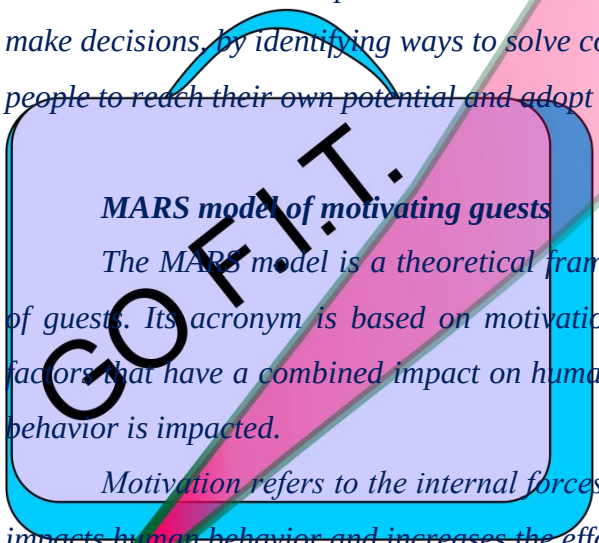
Baralou Evangelia Alba, Greece

Introduction

The following document explains in detail the content of the 'Soft skills development for trainers working in the Tourism and Hospitality Industry', analysing each slide in a separate section and offering illustrative examples.

This document aims to help participants in hospitality and tourism organizations, and in other organizational settings at large, to develop soft skills that can help them understand and to the extent this is possible manage the exercising behaviour and nutrition habits of guests. This includes the guests (i.e. customers) in order to go fit, adding exercise and good nutrition habits to their lives, but could also include the people that trainers work with (e.g. supervisor, subordinates, team members, etc.). In summary, the presentation can be used for both cases, since a number of issues raised and recommendations made when discussing the behaviour of people are similar for guests and colleagues. The main learning objectives of this presentation are to understand what drives the behavior of guests including how they think, feel and act, what motivates them and raises their engagement, when training, what causes conflict, stress and possibly poor performance.

Having achieved that, the next step is to manage human behavior, by enabling rich communication via multiple channels between individuals and groups, by empowering people to make decisions, by identifying ways to solve conflicts, by motivating people and finally by supporting people to reach their own potential and adopt the required behavior.



MARS model of motivating guests

The MARS model is a theoretical framework for understanding what motivates the behavior of guests. Its acronym is based on motivation, abilities, role perceptions and situational factors, factors that have a combined impact on human behavior. If any of these factors changes, individual behavior is impacted.

Motivation refers to the internal forces that affect a person's voluntary choice of behavior. It impacts human behavior and increases the effort we put or the degree of persistence until we achieve our aims. Abilities refer to our natural aptitudes and learned capabilities required to successfully complete a task. Role perceptions include beliefs about what behavior is required to achieve the

desired results and relevant priority. Role perceptions need to be concrete and understood, so that people are clear not only about what is expected from them. The priority in tasks is also important, as conflicting priorities can cause disruption and frustration and increased levels of stress. Situational factors also influence behavior in organizations. These include environmental conditions beyond the individual's short-term control that constrain or facilitate her/his behavior, including: time, budget, facilities, etc.

At the left of the model, there is another list of parameters impacting human behavior. At the top, there is personality and values, the two issues that will be analyzed further below, which suggest that people behave differently, partly because they have different personalities and values. Self-concept, how we feel about ourselves is impacted by how we believe others view us. Our perceptions about others can take the form of stereotypes and also impact our behavior. Our emotions impact how we make decisions, thus, it is important to be aware of the emotions of others.

Personality

Personality comprises of our thoughts, feelings and values, it is a relatively enduring pattern of behaviors that may characterize a guest. It impacts behavior, which can be observed by others and refers to external traits, for example observable behavior, but also to internal traits, thoughts, values, emotions, which are not directly observable.

Five-Factor Personality Model (CANOE)

CANOE is a theoretical model of personality that is useful for analyzing and understanding different personalities. It describes 5 domains of personality and a number of subcategories. It is one very popular tool, used in psychometric tests, which suggests a potential for certain behavior. In an organizational context, it could be used for job matching and for forming teams with a balanced representation of different personalities.

Five-Factor Personality Model (CANOE) categories

CANOE model represents five categories. Each one will be analyzed below.

Conscientiousness refers to efficiency, order, good organization, goal orientation and self-discipline. A less careful, easily distracted person, not focused in achieving goals would not score high in this category.This trait reflects how organized and persistent we are in pursuing our goals. High scorers are methodical, well organized and dutiful. Low scorers are less careful, less focused and more likely to be distracted from tasks.

Agreeableness is an important category and indicates empathy, friendliness and willingness to cooperate. People who would score low in this category would be considered as aggressive, hostile and less willing to cooperate with others. This trait reflects how we tend to interact with others. People high in agreeableness tend to be trusting, friendly and cooperative. Low scorers tend to be more aggressive and less cooperative.

The next category is neuroticism. People who score high in this category exhibit high levels of anxiety, insecurity, hostility, depression. Low scorers tend to be more relaxed, less emotional and less prone to distress. This trait reflects the tendency to experience negative thoughts and feelings. High scorers are prone to insecurity and emotional distress. Low scorers tend to be more relaxed, less emotional and less prone to distress.

Openness to experience suggests being open to new experiences. People who score high in this category are considered to be imaginative, creative, aesthetically sensitive, appreciating art and showing an interest in culture. This trait reflects 'open-mindedness' and interest in culture. High scorers tend to be imaginative, creative, and to seek out cultural and educational experiences. Low scorers are more down-to-earth, less interested in art and more practical in nature.

Extraversion suggests that a person is considered to be outgoing, talkative, sociable, etc. Low scorers prefer to be more quiet and reserved. This trait reflects preference for, and behavior in, social situations. Low scorers (introverts) tend to be more quiet and reserved.

Example

You have a team of 3 guests, each with unique personality traits.

- *Try to identify the personality traits of each guest*
- *How will you customize your training approach to someone:*
  - *Who is open to new experiences?*
  - *Who appears to be neurotic and experiences high level of anxiety?*

Values in the Workplace

Values guide our behavior. They include what we believe is good or bad, right or wrong and this determines how we behave. Each one of us has a unique value system that prioritizes values and changes with time. Organizations also have values. It is important to ensure value congruence between individual, team and organizational values.

Schwartz's Values Model

This is a model that analyses and clusters different values.

Self-Direction: independent thought and action, derives from need for control and mastery.

Stimulation: excitement, novelty, and challenge in life, derives from the need for variety.

Hedonism: pleasure, enjoying life, derives from need for pleasure and satisfaction.

Achievement: personal success, derives from need for obtaining social approval.

Power: social status and prestige, derives from need for control or dominance over people and resources.

Security: safety, harmony, derives from need for basic individual and group requirements.

Conformity: restraint of actions, derives from need for smooth interaction and group functioning.

Tradition: respect, commitment, derives from need for acceptance of customs and ideas that one's culture or religion provides.

Tradition and conformity values share the goal of subordinating the self to socially imposed expectations.

Benevolence: preserving and enhancing the welfare of those with whom one is in frequent personal contact, derive from the need for smooth group functioning.

Universalism: understanding, appreciation, tolerance, and protection for the welfare of all people and for nature, derives from the need to care for the larger society and world and for nature.

If we look at the broader categories, we can notice that the values model is related to personality traits:

- *Openness to change suggests motivation to pursue innovative ways*
- *Conservation suggests motivation to preserve the status quo*
- *Self-enhancement, suggests the individual is motivated by self-interest*
- *Self-transcendence, suggests that the individual is motivated to promote the welfare of others and of the natural environment*

Motivation

How do we motivate others?

Motivation refers to those forces (internal-external) that affect a person's voluntary choice of behavior, the direction given, the intensity of the effort put, but also the persistence given, until the desired result or goal is achieved. Extrinsic motivation refers to rewards given by others, such as rewards and praise, while internal motivation refers to rewards derived by oneself, such as the

passion one has for the end goal, the interest and pleasure derived. A contemporary theory of motivation will be explained below, the expectancy theory of motivation.

Expectancy theory of motivation

Expectancy theory of motivation suggests that an individual can be motivated to behave in a certain way, because of the expectations this person has as the result of the selected behavior. For example, the expectation to live longer could motivate a person to start exercising. So there are three basic elements in this theory: the effort one puts, the performance achieved and the outcomes this performance brings for the individual. To ensure that a certain effort will lead to a desired performance, people need clear direction and goals and have to be trained. They also need to be given sufficient resources (e.g. equipment), supportive coaching and continuous feedback by the trainer. To link performance to outcomes, the trainer needs to measure performance accurately, describe outcomes of good and poor performance and explain how rewards are linked to past performance. The trainer must ensure that rewards (e.g. the notion of living a longer life) are valued and important for the individual.

TOURISM EXPERIENCE, STORYTELLING AND TRAVELER BUYING PROCESS

Katsoni Vicky, University of West Attica, Greece

Travel services are mostly considered experience products (Cohen 1979; Uriely 2005; Moscardo 2010; Sundbo and Sørensen 2013), mainly intangible (Murray and Schlacter 1990; Gremler et al. 1994) whose quality is difficult to be evaluated prior to consumption (Rosen 2000, 2009; Dye 2000; Zeithaml et al. 2012). These features determine high customers' involvement in buying decision practices and a consequent high-risk perception that usually generates a longer and more complex consumer behavior process (Murray and Schlacter 1990; Laroche et al. 2004). Furthermore, purchases of travel services more and more take place in the online environment where consumers' behavior has specific features (Viglia 2014).

Different people can desire different kind of tourist experiences (Cohen 1979) and the evaluation of their quality comes from a comparison between expectations and perceptions. According to the approach developed by Parasuraman et al. (1985), Zeithaml et al. (1993), expectations are influenced by personal needs, previous experience, word of- mouth, explicit service promises (e.g., advertising), implicit service promises (i.e., price, tangibles), transitory service intensifiers (e.g., emergences, services problems), and situational factors (e.g., bad weather, a strike, etc.) while perceptions are influenced by the result of the service delivery and external communication to the consumers.

Internet-based systems mediate the travel experience by means of user-generated content (UGC) that tourists can share (videos, photos, etc.). In this way, the tourism practice can be more and more accessible within everyday life without necessarily moving toward a specific destination (Jansson 2002; Uriely 2005; Tussyadiah and Fesenmaier 2009; Wang et al. 2012).

Social media that allow sharing UGC operate as virtual "media of transportation" acting on imagination of tourists (Tussyadiah and Fesenmaier 2009). Jennings and Weiler (2006) identified two different kinds of mediators of the tourism experience: personal (i.e., other tourists, tourist providers, local governments, and communities) and nonpersonal (design, signage, esthetic, and settings).

With the development of ICTs, researchers give more and more attention to new kinds of technology-based mediators generally connected to the Internet and to new devices: the well-known

smartphones, digital cameras, and new mobile devices like Google Glass or Apple Watch (wearable devices). The UGC created by tourists around the world can be shared on social media and affects, in this way, the travel experience of other people.

During their travel experience tourists hear and create their own stories that then, in turn, can be told to (shared with) others as memories. In the tourism system, stories can be produced at different levels: stories of residents (traditions, heritage, etc.), of destinations (history, culture, etc.), of the tourist staff (employees, tour guides, etc.),and of other tourists at the destination (Moscardo 2010). The action of telling stories is called storytelling and has been defined by The National Storytelling Network as: "the interactive art of using words and actions to reveal the elements and images of astory while encouraging the listener's imagination."

According to this definition, storytelling "involves a two-way interaction between a storyteller and one or more listeners." Therefore, listeners have an active role, being co-creators of the story, because they actually create the story in their mind on the basis of the performance of the teller filtered by their personal features (past experience, beliefs, etc.).

Word-of-mouth and storytelling are concepts considered at the origin of folklore, religion, and myth, therefore telling stories is one of the most ancient ways to transfer contents from one person to another (Denning 2006; Sassoon 2012).

With the development of ICTs in the tourism sector, there is a proliferation of these narrative discourses on social media; travel stories create meanings by combining texts, images, and videos (travel blogs and communities, Facebook, etc.). Travelers can at first listen to stories by other tourists or travel operators, etc. and then perform and create their own. These first-hand stories can then be shared with other people during the trip and in the post-trip stage, influencing other travelers' behavior and affecting the brand image of the tourism operators and/or destination. According to Hsu et al.(2009), "first-hand visitor reports of experiencing destinations indicate that tourists tell stories that offer clues of how they interpret and enact the myth that these destinations enable".

Tung and Ritchie (2011) identified four dimensions which enable experiences to become memorable:

1. *affect, concerns the valence of the experience: positive emotions and feelings are more recalled by negative ones. Starting from positive emotions, travelers are more likely to provide more details about their experience;*
2. *expectations, a not planned, unexpected event (a surprise) can reinforce the recall of a certain experience;*

3. *consequentiality, refers to the possible results of the trip. For example: social relations created during the experience (e.g., friendship, love), intellectual development acquired thanks to the visit (e.g., learning the history and the culture of a destination), self-discovery (e.g., a change in the state of mind of the traveler after the experience occured during the trip), and overcoming physically challenges (e.g., developing skills and expertise in a sport);*
4. *recollection, refers to the effort made by travelers to remember the tourism experiences. They can help themselves with a photograph, a video, a story, a souvenir, etc.*

Therefore, a memorable and engaging experience can be easily recovered from the memory becoming narratives of a storytelling activity.

According to the decision-making studies, the traveler buying process consists of five stages(Kotler et al. 2010; Zeithaml et al. 2012).:

1. *need recognition,*
2. *information search,*
3. *evaluation of alternatives,*
4. *purchase decision, and*
5. *post-purchase behavior*

Travel planning starts with the recognition of a need that can be generated by internal and external stimuli. Therefore, previous experience guides the customer toward a specific product that he or she knows could satisfy that specific need. Moreover, suggestions of other people, commercials, or other marketing stimuli can influence the customer's identification of which activity could satisfy that need (Kotler et al. 2010).

After having recognized their needs, people try to find information about goods and services able to grant satisfaction. Consumers generally employ both personal and non-personal sources in order to obtain thorough information (Zeithaml et al. 2012). Personal information comes from word-of-mouth spread by family, friends, neighbors, colleagues, etc., while non-personal information is represented by both online and offline commercial sources (corporate website, advertising, salespeople, etc.) and public/third parties sources (official classifications, customers reviews, ratings, rankings, awards, etc.) (Kotler et al. 2010).

The evolving marketing mix for tourism services

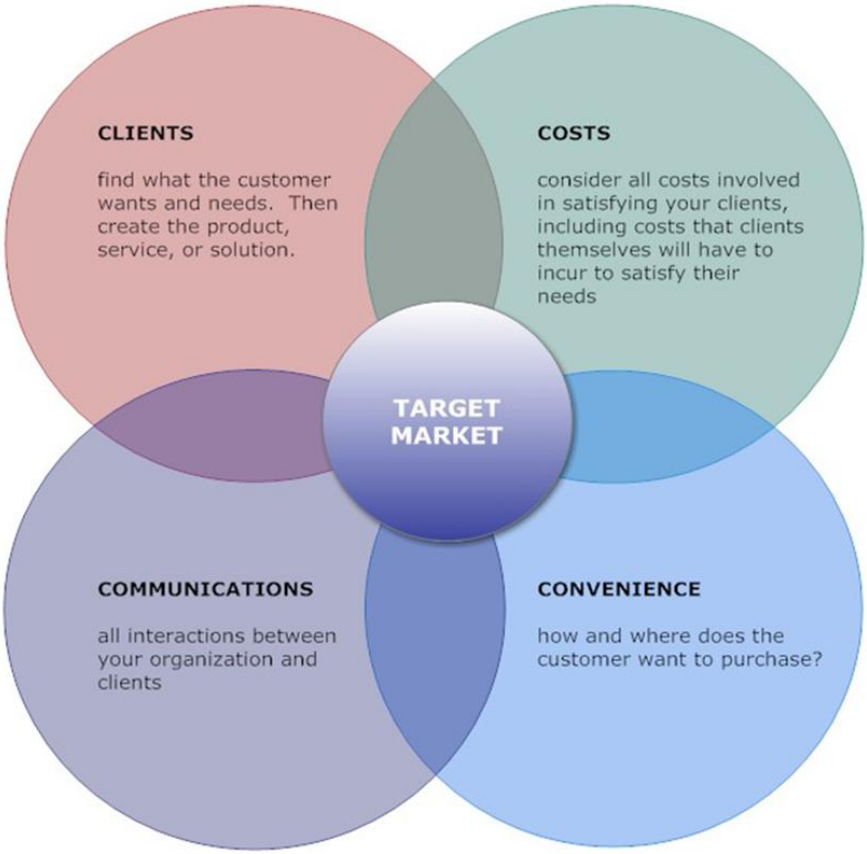
The marketing mix represents "the four key decision areas that managers must manage so that they satisfy or exceed customer needs better than the competition.

Internal marketing is a logical extension of the marketing mix considerations to recognize that the employees of an organization are stakeholders too.

Relationship Marketing (RM) grew in the 1980s with the development of services marketing studies, the network theory, and business-to-business marketing (Hakansson and Ford 2002). According to Christopher et al. (1991), an effective management of customer relationships allows companies to enhance long-term profitability, increasing customer retention. The introduction of relationship marketing affected both marketing theory and practice leading to a change in the very definition of this concept. Interest in relationship marketing has increased due to a greater recognition of its benefits to both firms and customers, as well as thanks to the rapid advances in information technology (Berry 1995). The progress of IT and social media offers companies the opportunity to develop dynamic relationships and interactions with customers from the very first stages of the product development. As a consequence, consumers can take part in the value-creation process (co-creation), personalizing their experiences through interaction and dialog.

As a result, marketing now is defined as the process of identifying and establishing, maintaining, and enhancing relationships with the customer and other stakeholders, at a profit, so

that the objectives of all parties involved are met (Morgan and Hunt 1994; Sheth and Parvatiyar 2002; Grönroos 1997; Kotler et al. 2010).



Recent Developments in the Travel Distribution System

Web 2.0 brings a second generation of opportunities for collaboration and information sharing based on web-based communities and hosted services. For tourism the benefits include enhanced information sharing between consumers and between business and consumers. The Web gives tourist firms and organisations the ability to reach highly motivated customers with information-rich messages at a negligible cost. Nevertheless, competitive advantage on the Internet will not be realized by applying existing marketing models but, rather, by developing innovative concepts. Integrated approaches that build on the advantages and capabilities of technology need to be translated into concrete innovative marketing actions. The Internet, Dogac, et al (2004) argues, enhances the level of collaboration between tourist operators and brings about greater levels of interoperability with internal and external applications, previously available to technologically advanced tourism stakeholders via proprietary systems.

Over the last decade, investments in ICT in the tourism and hospitality industry have substantially increased. The challenge for the tourism operator is the provision of accurate, localised data, increasingly via ICT, whilst maintaining a trust relationship with the tourist. Developing destinations face increasing disadvantages in establishing links with their clientele, promoting their resources, distributing their products, and collaborating with industry partners, especially in high- and upper-digital access markets. This has considerable effects, as not only do they fail to fulfil their full potential and then to gain sufficient economic and socio cultural benefits but also they are unable to build their resources and expertise in order to improve their competitiveness and ensure their future prosperity.

ICTs have the potential to upgrade the quality of life by providing new tools for better access to information, knowledge management as well as sharing. A shift of power to the buyer is also evident in that the modern day tourist has ready access to the World Wide Web and a store of information. The tourist consumer has more choice when buying travel products also because of the options provided by on-line travel agents and direct marketing by airlines. Sterne, (1997) adds getting management support, assigning responsibilities, establishing procedures, and setting standards against which the efforts are measured to this list.

In tourism, the ability of destination organizations and businesses to select, to aggregate, and to distribute information to the right consumer at the right time and in the right place is critical. ICT-skilled tourism enterprises and destination marketing organizations (DMOs) have huge opportunities to apply ICTs for communicating their offering, enhancing their visibility on the market and strengthening their competitiveness (Gretzel, Yuan, and Fesenmaier 2000; Buhalis 1998). Design, content, and production access can be achieved through appropriate training, which stimulates the development of specific skills and also trigger staff behavioural intention to use ICTs. In addition, institutional and governmental incentives can support businesses' decision to invest in innovative tools and applications.

The integration of IT into the organizational fabric of the destination marketing organization (DMO) is an important key to success. It is difficult for most DMOs, however, to keep pace with the evolution of new technologies, the emergence of innovative advertising strategies, the changes in the consumer market, and the growing competition due to increasing globalization. They often have to struggle with limited financial and human resources, a lack of technological expertise, and time constraints. The question of how to move from the current way of doing business to one that is responsive to these changes becomes a vital concern.

The travel distribution system has evolved over the last few years, especially because of the advancements in information technology. Changes have regarded both structural and functional

aspects with the development of different connection paths between suppliers and consumers, the decline of some traditional types of operators, and the compelling entrance of new players with the use of new communicative and selling tools.

We can identify different development stages of digital travel distribution. A first step consisted in the birth of Global Distribution Systems (GDS) during the 1960s. The GDS collect information by Central Reservation Systems (CRS) of each travel supplier (airlines, hotels, etc.) and make them available for travel agents to make bookings and sales. A specific automatic system, called switch, links various GDSs and the CRS of a hotel chain or an airline. The switch transfers data (prices and availabilities) from CRSs to GDSs and vice versa and operates as a translator and transaction processor (Kotler et al. 2010; Mauri 2012). Main GDS are: Amadeus, Sabre, Galileo and Worldspan (the last two owned by Travelport).

In this stage, intermediaries like travel agents and GDS grew very fast and the power shifted from travel suppliers to distribution channels (Thakran and Verma 2013).

Later, in the 1990s the development of the Internet determined a new change in the travel distribution system, as it increased the opportunity to reach customers and prospects directly by means of a cost-effective tool. This enabled travel companies of all size (both large and small-medium size firms) to create a direct connection with consumers overcoming tourism intermediaries (GDS and travel agents) and caused the so-called process of disintermediation (Kracht and Wang 2010; Thakran and Verma 2013). As a consequence, travel suppliers started to invest on their websites in order to offer information about prices and availability and sell their services. Travel suppliers started to develop their own websites in order to create direct connections with travelers and, in turn, new online intermediaries entered the market. For example, Sabre controls Travelocity and Lastminute.com, while Travelport manages Orbitz. On the contrary, offline travel agents suffered the spread of new competitors and had to reconsider their role focusing more on specialization and differentiation rather than on mere retail.

More recently, travel distribution evolution has been affected by the spread of social media, capable to influence the purchasing behavior of travelers and the way they communicate with suppliers and with other consumers. New players like virtual communities and meta-search websites have now the power to mediate the travel distribution process, directing consumers' choices toward travel suppliers or intermediaries.

The development of Web 2.0 has created new opportunities for travel suppliers and of course, hotels. An increasing connection of customers to a multitude of devices, real-time booking, personal clouds, ubiquitous communication, and peer-to peer market places are changing again the travel distribution structure. This new step of digital distribution is deeply connected with customer

engagement technology and the so-called "Social, Context, Mobile-So- CoMo" (Buhalis and Foerste 2013).

Therefore, social web generates new ways to interact directly with consumers.On the one hand, travel suppliers are becoming more familiar with new Internet technologies and are aware of the importance of, at least, having a basic "social presence". They increasingly have their own website and start to consider seriously the importance of social media.

On the other hand, new operators enter the travel distribution system. They can be called "mediators" because they do not sell the products but generally the transaction is completed on another website (of the travel supplier or of intermediaries) or offline. These kinds of websites allow travelers to get more information about tourism services: compare prices, read recommendations of other customers, consult the rating and the ranking, learn more about the product, etc.

Travel "mediators" create additional value for customer, helping them to find the right service and to compare alternatives. Specific categories of "mediators" among social media are travel review websites (i.e., TripAdvisor) and virtual communities (Lonely Planet). Here travelers can share user-generated content and compare rankings and ratings about a travel company or a destination.

Another case of third-party websites that increasingly mediate the travel behavior process is that of meta-search websites (e.g., Skyscanner, Trivago, Kayak). They allow web surfers to look for and compare various tourism services (Kracht and Wang 2010): flights, hotels, car rentals, etc. Meta-search websites are operators that enable travelers to compare services provided by both online travel agencies and travel suppliers (airlines, hotels). Travelers can examine ratings, rankings, consult reviews, user-generated content, and most convenient prices published on the web.

Another way travel suppliers can employ to establish a direct relationship with consumers and prospects is the use of social media such as Facebook, Twitter, Youtube, corporate blogs, etc. Main objectives companies can achieve are: enrich traveling planning; generate relationships among travelers and between travelers and companies; and stimulate direct sales (Pan et al. 2007; Jansen et al. 2009; Xiang and Gretzel 2010).

Furthermore, travelers use search engines (e.g., Google, Yahoo, Bing) in order to look for and compare tourism services (Kracht and Wang 2010). Therefore, the company position in the search engine results has become a key strategic element. A survey of PhocusWright conducted in 2013 found that 49 % travelers use search engines to travel planning. Therefore, the travel company should optimize strategic search engine marketing (SEM) transforming search engines in actual hotel distribution systems (Paraskevas et al. 2011).

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