ANALYZING THE EFFECTIVENESS OF TEAMWORK IN THE CARE OF DIABETES WITHIN THE PRIMARY HEALTH CARE

By
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A project submitted in fulfillment of the requirements for the Masters in Health Science (Health Services Management)

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Declaration of Originality

I, the undersigned, hereby declare that the dissertation, *Analyzing the effectiveness of Teamwork in the Care of Diabetes within the Primary Health Care*, is the product of my own research and no part of it has been reproduced from any other organisation unless as acknowledged accordingly.

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*June 2007*

Dr. Sandra Buttigieg, M.D., MBA, M.Sc  
*June 2007*
Dedication

This dissertation is dedicated to all the multidisciplinary professionals within the Primary Health Care who in spite of all the difficulties and limitations they encounter, they exert all their efforts to deliver the best of care to their patients.
I am grateful to my supervisor Dr. Sandra Buttigieg, M.D., MBA, M.Sc., who has guided me with great dedication and expertise, and for her invaluable support.

I am indebted to Dr. Neville Calleja, M.D., M.Sc. (London), M.Sc. (Malta), DLSHTM GradStat, who helped me analyze my data and for his advice, and also to all the staff in the Primary Health Care who participated and helped me collect my data. Without their help it could not have been possible for me to carry out this study.

Special thanks to my family, especially my lovable son, Yevegene who was very understanding and supportive in times when he was very busy with studying for his final exams and working at his own dissertation. Appreciation also goes to my course colleagues, and also to members of staff in the Department of Health Services Management at the Institute of Health Care for their friendship and collaboration.

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Last, but certainly not least, I would like to thank the coordinators of the Health Services Management, Dr. Natasha Azzopardi Muscat and Dr. Kenneth Grech for giving me the opportunity to be one of their students and for all their support.

May this study serve to benefit both clients and staff.
Executive Summary

Introduction: Team performance in the diabetes care has wide ranging and far reaching consequences. Diabetes is on the increase worldwide and to no less extent within the Maltese Islands. Diabetic patients consume a large proportion of health and social care resources. They are more likely to see their GP, to be admitted as inpatients, and to use more inpatient days than those without such condition. The World Health Organisation has identified that such condition will be the leading cause of disability by 2020 and that, if not successfully managed, will become the most expensive problem for health care systems. Hence, it comes as no surprise that effective diabetes care should become a top priority of the Maltese healthcare service agenda.

Objective: In view of this, the study aims at assessing the effectiveness of teamwork within the State Primary Health Care since a large proportion of diabetic patients are seen in the health centres. The objectives of the research are to:

- Investigate the situation of teamwork in the management of diabetic patients in primary health care in Malta
- Investigate the extent to which teamwork has developed in the management of diabetic patient in primary health care in Malta.
• Assess the extent to which team building is associated with team climate.
• Assess the extent to which team climate is associated with patient satisfaction.
• Identify the views of the diabetic patients with regard to diabetes care service provided in primary health care in Malta.

Thus in this study various essential key factors were reviewed in the literature, in particular, team building and team developing; essential processes; benefits and barriers; teamwork in primary health care; the role of teams in diabetes care; patient satisfaction and quality of service.

**Method:** The health centres which were involved in the study were Mosta, Paola and Floriana Health Centres. The target population included the main professions which form the diabetes team, that is, doctors, nurses, chiropodists, dietician, endocrinologists and ophthalmologists, and a selection of diabetic patients from different age groups, both males and females who utilised the service on routine basis. Data collection was carried out using triangulation of methods to improve the validity of the study. The methods used were self-report questionnaires for both the team members and the patients.

**Results:** Results revealed that not all professionals involved in diabetes care perceive that they work in a team. However, those perceiving to be team members enjoy a number of processes which are imperative to effective teamworking. Those professionals who
claim to work on individual basis have put forth very relevant suggestions which were highlighted in the ‘Recommendations’ section.

**Recommendations:** Recommendations for management and clinical practice include:

- Inclusion of a nurse practitioner in the team who would make up for the lack of dieticians in the department and release the doctor from prescribing which accounts for most of the doctor’s clinic time.

- Contribute collectively through a shared effort towards achieving higher levels of quality care.

- Establish interpersonal and intrapersonal working schedules so as to achieve smooth running of the clinic and continuity of care.

- Establishing of effective communication in patient care.

- Official recognition of team and support by both the members and the organisation.

- Organise regular meetings to discuss work related issues, address areas of disagreement and reach relevant decisions.

- Establish team goals, evaluate team performance through audit meetings and peer reviews

- Identify a team leader to align and motivate the team.

- Presenting the Diabetes Team as a model for other multidisciplinary teams working in the Primary Health Care, should the other recommendations be implemented and
proven successfully.

Conclusion: In conclusion, the diabetes care team in the Maltese Primary Health Care Department needs to improve and implement several team processes in order to ensure better team effectiveness.
Glossary

0.1 Team Building

During the early stages of their existence, the team lacks the history that long standing teams have. This history is often the glue that holds a team together and consequently new teams often require team building to give them shared experiences to draw upon.

0.2 Team Development

According to Tuckman (1965) the team undergoes four main stages: forming, storming, norming, and performing, before it develops and grows. Team development is specifically aimed at meeting identified need to help the team deliver its goals. Team development is enhanced by offering equal share to its members and by working together.

0.3 Key components of Team

A group is said to be a team if the members share common goals, practice adequate collaboration and interaction and have relatively well defined and clear roles in the team.
0.4 Essential processes of Team

Effective teams are characterised by certain processes or mechanisms by which the team acts as a united group. These processes focus mainly on: interchange ability; appreciation of conflict / differences; balance of participation and collaboration; open communication and mutual support.

0.5 Benefits of Teamwork

Teamwork has a good impact on both the patient and the provider. The patient benefits from better quality of care and enhances patient’s satisfaction and safety. On the other hand, teamwork enables providers to combine their talents to provide innovative solutions and enhances their self-esteem.

0.5 Barriers to teamwork

Various factors contribute to barriers to teamwork, and not only the professionals working alongside one another. These factors can be structural, historical and attitudinal.

0.6 Teamwork in Primary Health Care

Primary health care team is the first level contact of individuals with the national health system which brings healthcare as close as possible to where people live and work, and constitutes first element of a continuing health process. Primary care teamwork has been reported to improve health delivery and staff motivation and to have led to better
detection, treatment, follow-up and outcome in diabetes management.

0.7 The Role of Teams in Diabetes

Successful diabetes care interventions usually involves a coordinated multidisciplinary care team. It may involves multiple practices, for example primary and specialist care, or multiple organisations. Effective diabetes care tend to exploit the varied skills of the team by using the following strategies: population based care; treatment planning; evidence based clinical management; self management support; more effective consultations; and sustained follow-ups.

0.8 Patient Satisfaction

Patient satisfaction is crucial in diabetes care. This is strongly affected by several factors, of which most commonly are: professional attitudes and behaviours, communication, care and reassurance, professional interpersonal skills, information provided to the patient, waiting time and appointments, continuity of care and lack of availability of parking place

0.9 Service Quality

"Best care wraps around the patient, rather than the patient fitting the care that is offered", (General Medical Council, UK, 2000). This has become one of the most prominent issues on the health policy agenda and is currently fashionable in healthcare
circles in several countries. In the caring service, within the public sector, quality must be assured in four main areas - economic, political, professional and social.
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1. INTRODUCTION

1.1 Introduction

The challenges of organizing health care in the modern global health market are considerable. There are continual improvements in medical technologies, greater levels of knowledge and awareness amongst patient populations and increasing demands for the variety of sources of health care available within National Health Services in Europe. The provision of free health care at the point of delivery to the population has become one of the most important issues in the Maltese political agenda in the early part of the twenty-first century. The Maltese National Health System (NHS) can be described in a similar manner as the British NHS which has become a massively complex institute characterized by large organizations, repeated restructurings, and subject to a wide range of political and economic pressures (Borrill et al, 2000).

Meeting these pressures and demands requires that health professionals work in partnership with each other, with other professionals and with patients. The value of working as a team has already been recognised as that of better quality of health care and patient satisfaction by putting an emphasis on an integrated patient-centred approach of health care delivery (Hassell, 2000). This is the key to success in the primary health care where we are now moving away from health care provided by individual practitioners to health care delivered by a team of professionals (Firth-Cozens, 1998).
1.2 Background

Within the local scene, the Maltese Primary Health Care is currently undergoing changes and restructuring in order to make it more focused and sensitive to patients' needs, by directing it towards an integrated and holistic care, where all decision-making, technologies and health care providers shall be patient-centred to achieve the best possible outcomes. This can be successfully achieved through effective teamworking (Camilleri, 2003).

Collaborative teamworking involving the different health care professions is one effective way of achieving these objectives between the multidisciplinary care groups. Calkins et al. (1998) state that quality of care can be achieved as a result of effective teamwork since patients may benefit from combined knowledge and skills of team members, and from innovative solutions to possible unfamiliar problems. Against this background, this study shall focus on evaluation of teamwork in Diabetes Care in the Maltese Primary Health Service and in which I shall attempt to answer the following research questions.

1.3 Research Questions

- To what extent is teamwork prevalent in the management of diabetic patients in primary health care in Malta?
- To what extent has teamwork developed in the management of diabetic patients in the primary health care in Malta?
- To what extent is team building associated with team climate?
- To what extent is team climate associated with patient satisfaction?
• What are the views of the health care professional team members and diabetic clients with regard to diabetes care service provided in primary health care in Malta?

1.4 Aim

To investigate the level of effectiveness of the diabetes team in the management of diabetic patients by exploring team building, team climate and patient’s satisfaction.

1.5 Objectives

The objectives of the research are to:

• Investigate the extent to which teamwork is prevalent in the management of diabetic patients in primary health care in Malta
• Investigate the extent to which teamwork has developed in the management of diabetic patient in primary health care in a Malta.
• Assess the extent to which team building is associated with team climate.
• Assess the extent to which team climate is associated with patient satisfaction.
• Identify the views of the diabetic patients with regard to diabetes care service provided in primary health care in Malta.

1.6 Statement of the Problem

1.6.1 Overview of Diabetes and its Management

Diabetes is a major and growing health care problem. Primarily because of the increasing
prevalence of type 2 diabetes as well as the increase in cases of type 1 diabetes, it is expected that the number of people with diabetes will double by the year 2010 (Amos, McCarty, Zimmet, 1997). In 1987, during Phase V of the Maltese National Diabetes Programme, it was found that 10 per cent of those aged over 34 had diabetes mellitus (DM) and another 13 per cent had Impaired Glucose Tolerance (IGT) (Schranz, 1989).

Diabetes accounts for a huge burden of morbidity and mortality through micro- and macro-vascular complications (Garcia et al., 1974; Stamler et al., 1993). However, it is now clear that strict control, mainly of blood glucose, blood pressure, and cholesterol can reduce the risk of diabetes-related complications (The DCCT Trial Research Group, 1993; The UK Prospective Diabetes Study Group, 1998). To achieve strict control, structured care through a multidisciplinary approach is the best recommended method of choice (Griffin, 1998). This approach is being adopted by several countries in the western world.

For example, in the Netherlands, over the past 20 years, the responsibility for the care of people with diabetes has shifted away from hospitals to primary care. During this period, randomized trials have demonstrated that if regular review of patients by the interprofessional team is guaranteed, the standard of primary care can be as good, or better than hospital outpatient care (Beckles et al., 1998; Konings et al., 1995; Colhoun et al., 1999; Nathan, 1995). For this reason countries, such as UK, have decided that the development of primary care, based on an interdisciplinary team approach, will be central to the planning and delivery of health services.
1.6.2 The Local Scenario

The primary health care in Malta, which also caters for diabetes care, is provided by the state health service and by private general practitioners. These two systems function independently of one another. In the state health service, the diabetes clinic is run by the nurse who is assigned to do the clinic on regular basis, and the doctor who happens to be on duty during clinic time. This leads to a lack of continuity of care and in turn is not conducive to the development of teamwork and a sound doctor-patient relationship which is one of the fundamental aspects of effective primary health care. Usually there is also lack of feedback communicated between the diabetes doctor and nurse, and the other multidisciplinary professionals which form the primary team in the care of the diabetic patient. This also leads to dissatisfaction for both patients and clinicians.

On the other hand, only a few private primary health care practices keep detailed patient records which again are not shared with the state primary health care professionals. This leads to very fragmented service for diabetic patients with the consequence of lack of quality of care (Azzopardi Muscat, 1999).

So as it stands, diabetic patients have the opportunity to choose where to go for their treatment. Additionally, such patients tend to shift not only from one practitioner to another but also between state and private health services at the expense of duplication of work with the result of wastage of resources and lack of teamwork, which as already discussed, results in lack of quality service and continuity of care.
Furthermore, the primary health care service in Malta is also facing other difficulties, which as already discussed, are not solely encountered in our country. These mainly include: unsustainable health services; limited human resources; expensive new technologies, and ever increasing patients’ expectations which have further crippled the service as well as the performance in the Maltese primary health care centres (Azzopardi Muscat, 1999).

The lack of human health care workers, in particular, has brought about a considerable impact on the level of quality care delivered to the patients, aggravated by discontinuity of care, lack of coordination, congruency and synergy that can be best achieved through a multidisciplinary teamwork (Cutajar, 2003; Sammut, 2003). Such issues were highlighted by various speakers in a conference held by the Primary Health Care Department (PHCD) with the theme “Teamwork in the Primary Health Care: Realising Shared Aims in Patient Care”. However, against this background which is not yet evidently sustained, poses a great challenge to investigate deeper into this matter.

Hence, in this study, the quality of diabetes care delivered to patients attending primary care clinics will be researched by investigating current care systems. From this focused study, the information obtained will be analysed to assess the effectiveness of teamwork and the patient satisfaction with the outcome of the service. Calkins, et al, (1998); Wagner, et al, (1996); Wagner, (1998) and Wagner, et al (1997) suggest that successful chronic disease interventions, such as diabetes care usually involve a coordinated multidisciplinary care team. Additionally, Townsend Rocchiccioli, O’Donoghue and
Buttigieg (2005) state that care of diabetic patients provides the perfect scenario where interdisciplinary teamwork can provide a holistic and a cost-effective management plan.

1.7 Why Study Diabetes Care in the State Primary Health Care?

It is estimated that this department provides services to 13,294 patients (Diabetes Annual Report, 2005). This is quite high when considering that 39,800 Maltese people (10% of the whole population) suffer from diabetes mellitus, with the majority of cases having the type 2 condition. As stated by the Central Office of Statistics (2006), the Maltese population at present is around 398,000.

Achieving a good quality diabetes service through teamwork in the Maltese primary care setting is recognised as presenting a particular challenge to health services management when considering the increased demands and costs resulting from new diabetes cases and its complications. Also, because as discussed earlier, effective collaborative teamwork in the management of diabetes in the primary health care, can have a more beneficial outcome.

Figure 1.1 demonstrates an increase in diabetic patients attending in the Health Centres over a sample of the last three consecutive years, amounting to 12,677 patients in 2003, 12,819 patients in 2004, and 13,294 patients in 2005.
According to the statistics referred from the Diabetes clinics in the Health Centres to the Director of Diabetes Services at St. Luke's Hospital (2005), about 20 per cent have not attended over the past 5 years. The rate of non-attendance at the primary health clinics may be a possible indicator of patient dissatisfaction with the diabetes service. It merits investigating to identify the causative factor and consequently inform management to take the necessary action to maximise attendance and prevent more patients from defaulting. A recent review of the literature on non-attendance in diabetes clinics worldwide underlined the importance of this problem, as these patients tend to have more risk factors and complications than those who attend (Griffin, 1998).

In fact, current epidemiological studies indicate that 84% of people living with diabetes in Malta are either overweight or obese and that diabetes accounts for one out of four
premature deaths occurring before the age of 65. In addition the leading cause of death in Malta, is cardiovascular disease which kills nearly two-thirds of all diabetes patients (Diabetes in Malta, 2005). It is, therefore, evident that complications from diabetes such as cardiovascular disease, blindness, renal failure and lower limb amputation continue to aggravate the health status of diabetes sufferers and the financial situation to cope and sustain overall health care.

1.7.1 The Diabetes Care Team in the Primary Health Care

In many cases, diabetes calls for a team effort. Different health care providers tackle the disease together, often with better results (Bero et al., 2000). According to Rubenstein et al. (1984), teamwork has been shown to shorten the length of hospitalization and can help keep patients from coming back to the hospital. Patients cared for, by collaborative teamwork are less likely than other patients, who see only one doctor, to develop complications such as blindness, kidney disease or damage, and stroke. The team members may change slightly from year to year to reflect the patient’s needs, but the core team probably remains intact. The diabetes team in the Primary Health Care mainly includes professional staff as demonstrated in table 1.1:
Table 1.1 List of diabetes professional team members

<table>
<thead>
<tr>
<th>Team Member</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>The Primary Care Doctor</strong></td>
<td>Primary care physicians are on the frontlines of diabetes care. They play a major role in the diabetes management. The doctor and the nurse are the main trained care providers for patients with diabetes. They are usually very experienced in the main aspects of managing the patient (Clinician Reviews, 2002).</td>
</tr>
<tr>
<td><strong>The Nurse</strong></td>
<td>A diabetes nurse is a qualified nurse who has advanced training and clinical experience. The nurse’s role in the primary health care settings is to serve as the diabetes expert in that practice (American Diabetes Association, 2000).</td>
</tr>
<tr>
<td><strong>The Endocrinologist</strong></td>
<td>An endocrinologist has specialized training in diseases that involve hormone including diabetes. A primary care doctor is likely to refer the patient to an endocrinologist to examine his/her blood sugar for response to standard treatment. Endocrinologists are involved when complicated treatment plans involving multiple drugs are under consideration, or when a patient needs special technologies such as insulin to keep his/her blood sugar under control (Joslin Diabetes Centre, 2003).</td>
</tr>
<tr>
<td><strong>Dietitian</strong></td>
<td>Diabetes and diet are so closely intertwined that every patient should work with registered dietician. As soon as the patient is diagnosed, a dietician can help the patient put together meal plans to meet his/her specific needs (American Diabetes Association, 2005).</td>
</tr>
<tr>
<td><strong>Ophthalmologist</strong></td>
<td>Early treatment can help prevent blindness, one of the most feared complications in diabetes. For this reason, a diabetic patient is urged to see an ophthalmologist at least once a year for a comprehensive eye examination (Clinician Reviews, 2002).</td>
</tr>
<tr>
<td><strong>Diabetes Educator</strong></td>
<td>Diabetes educator gives patients practical tips for living with the disease. The educator of diabetes patients is usually the nurse and the doctor (physicians). They provide important diet, exercise, blood sugar monitoring, and medication. In the local scenario, it is mostly the diabetes nurse who serves as an educator to diabetic clients (American Diabetes Association, 2000).</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td><strong>Chiropodist (podologist)</strong></td>
<td>Foot care is a crucial, but often overlooked, part of living with diabetes. The primary care physician can probably treat minor problems such as corns, but serious problems call for more specialized care (American Diabetes Association, 2000).</td>
</tr>
<tr>
<td><strong>Other specialists</strong></td>
<td>Depending on how well the patient is managing his/her diabetes, other than the primary care doctor, help to control the condition may be needed. Most patients require a form of specialty care along the way, whether it is simply for education or complications of the disease. If the disease is more advanced, the patient may be referred to specialists in addition to those already listed. Most often the patient may need a nephrologist, neurologist, urologist or a counsellor (Clinician Reviews, 2002).</td>
</tr>
<tr>
<td><strong>The Patient</strong></td>
<td>The patient has a big say in the diabetes team. The patient is the one who has to lobby for the right care and about getting the right tests and should be at the centre of planning and decision making (Jones, 2003).</td>
</tr>
</tbody>
</table>

### 1.8 Implications to Management

As already discussed, diabetes is a major health problem in Malta. More than 500 diabetic patients are admitted to St. Luke’s Hospital annually due to diabetes
complications (Schranz, 1997). Therefore, diabetes complications are laying heavy costs on the health services, a fact which also aggravates the problem of scarce resources. In view of this, there is justification in investing the effectiveness of teamwork in diabetes care, so as to aim for an integrated and holistic approach towards better patient care and to reduce morbidity and mortality as complications of diabetes. Identifying the weaknesses of the team and implementing the necessary changes may help optimise team performance. Therefore, this research attempts to add to the body of knowledge on Teamwork in Diabetes care with the aim of informing policy.

1.9 Conclusion

Hence, this management project intends to investigate various aspects of teamwork, mainly the team climate and patient satisfaction. The results obtained will hopefully enlighten the researcher to provide recommendations that will contribute to the improvement in the quality of diabetes care by bringing about the necessary changes.
2 LITERATURE REVIEW

2.1 Introduction

Patients are increasingly being seen by an array of health care providers and this issue is strongly alarming health authorities on fragmented delivery of health care services. Policy reports and charters worldwide urge a concerted effort to enhance continuity which can only be realized through teamworking (WHO, 1996 and Fulop & Allen, 2000). Teamworking enables organizations to employ a range of techniques for improving quality and reducing unit costs (Starfield, 1998), while Gregson et al (1991) and Pearson (1992) argue that teamwork is the way forward, and by implication, the way to achieve high quality care. Additionally, Hutchinson and Gordon (1992) state that teams share same objectives, support innovation and continuous improvement, and have an understanding of the different roles of their team members.

This chapter attempts to unfold the various theories and studies regarding teamwork in general and in health care. Specifically, the study will focus on the various professions forming the team in Diabetes Care in the primary health care. The main aspects reviewed in this chapter focus on the definition of a team, the core requisites of teamworking, the essential skills for teamwork and the benefits and barriers of teamworking.

For this purpose, a literature search was conducted using manual and electronic search of
the health management and clinical literature databases. A systematic search of three databases, *The British Medical Journal (BMJ)*, *Medline* and *Cochrane Collaboration* was undertaken. The keywords searched in the literature review for the first part of this chapter were **Team, Teambuilding, Team Formation, Teamwork in the Primary Health Care, Teamwork in Diabetes Care, Continuity of Care, Integrated Care, Collaboration in Health Care, Multidisciplinary and Interdisciplinary Teams**. These phrases are very often used interchangeably. For the second part of this chapter the keywords searched were teamwork; partnership; shared care and integration in diabetes care in the primary health care.

2.2 Definition of a Team

One can find various definitions of a team in the literature but the one stated by Mohrman and Cohen, and Mohrman (1995) is the definition that shall be researched in this study

"a group of individuals who work together to produce products or deliver services for which they are mutually accountable. Team members share goals and are mutually held accountable for meeting them, they are interdependent in their accomplishment, and they affect the results through their interactions with one another. Because the team is held collectively accountable, the work of integrating with one another is included among the responsibilities of each member".

*(Mohrman & Cohen, and Mohrman, 1995)*
This definition suggests that only those groups who perform at high levels due to their collective efforts should be considered teams. Further, team members are 'interdependent' such that each member's contributions are essential to the work of other members and to the achievement of the team's goals.

2.3 Key Components in an Effective Team

A group of healthcare professionals who meet on a regular basis may perceive themselves as a 'team', but for a group to be a team it must develop certain enduring characteristics. Indeed, one can argue that all teams are groups, but not all groups are teams.

Bower et al (2003) comment that a group is only a team if the members have at least one or more common objectives while Firth-Cozens (1998) and Borrill & West (2002) argue that real team members have relatively clear, shared work objectives; practice adequate collaboration and interaction to attain these defined objectives and have relatively well defined and clear roles in the team. They also argue that teams have an organizational identity; have a defined function; are recognized as a team by external others and affect others as a consequence of performance of their tasks. On the other hand, Ham (2003) stresses that in order for a team to function successfully, members should get to know one another and be familiar with each other's abilities, professional competencies and skills, motivational incentives and personality aspects. A team should also have a common vision and a structure that includes a leader.
2.3.1 Essential Processes of an Effective Team

Effective teams are characterized by certain processes. Independent of the kind of work the team is doing, effectiveness results from ongoing features of the team that facilitate team members working together productively. Sheppard (1993) refers to processes as mechanisms by which the group acts as a unit and not as a loose rabble. It is this synergy which makes teamwork attractive in organizations.

According to Brown (1988), the team processes focus mainly on:

1. **Interchangeability**, whereby within effective teams, members help one another with the work of the team, even when the tasks are outside a member’s area of expertise.

2. **Appreciation of conflict / differences**, which empower effective teams to improve decisions and explore alternatives.

3. **Balance of participation and collaboration**. Here, all members of effective teams learn to balance the time demands of the team with their other responsibilities.

Maynard & Bloor (1995) sustain that team processes also include:

1. **Focus**: The team maintains a focus on the group and the individual task, on its key goals and objectives and pace itself accordingly. If the team falls behind in a certain area, everyone pitches in to get back on schedule.
2 Open communication and mutual support. Here, the team let each other know what is happening that might affect the team’s activities and outcomes, and are supportive of each other. They let others know that they appreciate others’ efforts and ideas.

2.3.2 Focus on the key factors

As stated in the team definition by Mohrman, Cohen, and Mohrman (1995), the most essential factors which unit the team to function effectively are

Mutual accountability

Share goals

Interdependency

Interaction

Integration

2.3.2.1 Mutual accountability

Teams are becoming the most common business unit for high performance. Although the word gets used loosely and not always appropriately, there is universal acceptance that teams create opportunities for high performance results. Grol (2000) argues that a team’s performance includes both individual results and collective work products, which yield sums greater than its parts.
Teamwork represents a set of values that promote individual and collective performance. Teams value listening and communicating, sharing work responsibilities, provide support and can even make work more social and enjoyable (Drummond & Weatherly, 2000; Richards, 1998; Yin, 1994; Kesteloot, 1999). The literature further sustains that members are supportive of one another and recognize the interests and achievements of each other. When they are working the way they should, that is, utilizing their complimentary skills, are committed to a common purpose, performance goals, and adapt an approach for which they hold themselves mutually accountable, they are incredibly effective in achieving high performance results (Katzenbach & Smith, 1993).

The essence of a team is common commitment. Ellrodt et al. (1997) state that without common commitment, groups are just collections of individuals working together but separately. The literature highlights the fact that a working group's performance is a function of what its members do as individuals. Such groups are prevalent in large organizations where individual accountability is most important. They may come together to share information, perspectives and to make decisions, but the focus is always on the individual's performance (Epstein & Sherwood, 1996; Hunter, 2000).

2.3.2.2 Share goals

Successful teams develop shared goals/vision with regards to their patient's care plans and even with regards to their personal professional career. Evidence from the literature highlights the role which shared goals play. In practice, developing a shared vision and working together to make it a reality can be laborious and time-consuming. Bradley
(1996) emphasizes that "To be really successful, team members have to be aggressive to bulldoze........to take people through". Other researches argue that studies done show that teams where goal sharing was evident, respondents described an increased confidence and inspiration to learning and participation. Working closely and sharing visions with other professions gave practitioners opportunities to integrate and interact to create a common learning culture (Wilson & Pirrie, 1999; Rawson, 1994; McMichael & Gilloran, 1984; Matthia & Thompson, 1997).

2.3.2.3 Interdependency

Interdependence among the members of a team and other teams within the organization, varies with the structural complexity and goals of the teams. Thompson (1967), for example, has identified three forms of interdependence: pooled, sequential, and reciprocal:

Bolman and Dean (1984) have pointed out that the level of interdependence intensifies as its form moves from pooled to sequential to reciprocal. The higher the level of interdependence, the greater the need for managerial attention to effective linkages. Health care teams generally exhibit very high levels of interdependence among their component parts, usually of the sequential or reciprocal forms. Thus, the need for effective coordination and communication is usually very great in these teams. Clearly, in highly interdependent health care organizations, coordination and communication are cultural tools for managers.
2.3.2.4 Interaction and Integration

The mechanism which enhances interaction and integration is communication. Communication is to a team what the bloodstream is to a person (Hellriegel, 1999). He also states that communication skills are the foundation stones of good practices. Communication is transfer of information, ideas, understanding, or feelings among people (Mondi, 1995).

Communication failures are the leading cause of inadvertent patient harm. Analysis of 2455 sentinel events reported to the Joint Commission for Hospital Accreditation in UK revealed that the primary root cause in over 70% was communication failure. Reflecting the seriousness of these occurrences, approximately 75% of these patients died (Joint Commission for Hospital Accreditation of Health Care Organisation, 2004). All too often, clinicians providing care had very divergent perceptions of what was supposed to happen. Effective communication and teamwork is aimed at creating a common mental model, or 'getting everyone in the same movie' Equally important is creating an environment that feels 'safe' to team members so they will speak up when they have safety concerns. (Liang, 2002).

Literature regarding communication in primary health care shows that communication is affected by cohesiveness, time availability for decision making, perception in the difference in rank, education background, assertiveness and the traditional assumption that the doctor is leader. In addition such studies report improved interpersonal relationships and members’ perception of the team when good communication prevails.
Communication, especially in the feedback form and in programming and plans, is an important coordination mechanism itself. Yet it fulfills other functions besides coordination. When team members communicate, one of four major functions or some combination of them is served: information transmission, motivation, control, and emotive expression argue Scott & Mitchell (1979).

Communication can be verbal or nonverbal, and many times meaningful communication takes place without a word being spoken. For an effective communication to be complete, the receiver must decode the message – convert the symbols into meaning. There are factors like backgrounds, experiences, and aspirations of both the sender and the receiver (Hellriegel, Slocum, Woodman, 1998). In this case it is the multidisciplinary professionals that have prime influence on communication. Another known factor is that poor communication can be a problem during episodes of heavy workloads and the team members’ stress levels are soar (Eisenbereig & Goodall, 1993).

Non-verbal communication is also an important tool especially in teams performing complex tasks. In such high-drama working teams, awareness of the surroundings by means of visual and auditory contact helps in the co-ordination of such activities. This requires establishing standard working procedures and exposure to extensive on-job training and experience, in order for team members to anticipate the needs of their peers through non-verbal communication (Xiao, Hunter, Mackenzie, Jefferies & Horst, 1996). Such units which constitute different professions with different level of education, knowledge and technical skill, must be able to allow information to flow across the
different status levels (Carletta, 2001). An example of this was demonstrated by Baker (1996) who described how different disciplines in a ward communicated effectively between themselves to collectively devise a common multiple-patient record-keeping system suitable for all. This exercise reduced duplication of resources attributed to multiple record keeping systems and enhanced patient care.

Two other characteristics vital to high quality interprofessional teamwork are collaboration and decision making. Collaboration is coordinated efforts between interprofessional teamworking. Most doctors and other health professionals are required to work at multiple points of a spectrum, depending on the nature of the needs at hand. This is how Thomas & Sexton (2003) describes the characteristics of good interprofessional collaboration as illustrated in table 2.1.

### Table 2.1 Relationship between collaboration and teamworking

<table>
<thead>
<tr>
<th>Collaboration</th>
<th>Teamwork</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATTAINABLE, EVOLVING SHARED VISION</td>
<td>• Direction is clear</td>
</tr>
<tr>
<td></td>
<td>• Mission is engaging and motivating</td>
</tr>
<tr>
<td></td>
<td>• Goals and objectives are stated, restated, and reinforced</td>
</tr>
<tr>
<td></td>
<td>• Member roles and tasks are clear and known</td>
</tr>
<tr>
<td>CLEAR, SHARED OBJECTIVES MUTUAL SUPPORT</td>
<td>• Atmosphere is respectful</td>
</tr>
<tr>
<td></td>
<td>• Responsibility for team success is shared among members</td>
</tr>
<tr>
<td></td>
<td>• Member participation is balanced appropriately to task at hand</td>
</tr>
<tr>
<td></td>
<td>• Conflict is acknowledged and processed</td>
</tr>
<tr>
<td></td>
<td>• Goals fit organizational goals</td>
</tr>
</tbody>
</table>
| EFFECTIVE PARTICATION | • Task is achievable  
| | • Clear specifications regarding authority and accountability  
| TASK ORIENTATION | • Decision making procedures are clear and known  
| | • Communication and information sharing is regular and routine  
| | • Enabling environment, including access to needed resources.  
| INFORMATION AND APPROPRIATE MANAGEMENT STRUCTURES SUPPORT FOR INNOVATION | • Ongoing testing of assumptions  
| | • Mechanism to evaluate outcomes and adjust accordingly.  

Decision making to teamworking is crucial. Meetings are the most effective method of involving a group of people in activities which require discussion. Team members who have been involved in the discussions of the team’s goals or plans, or in the decision-making process itself, are more likely to feel that they ‘own’ those goals and plans and to work actively to achieve them (Weldon & Weingart, 1993). Also, the plans which a team develops are likely to be better, the wider the pool of views they take into consideration. Every member within the team has his/her own perception regarding the best way health care can be provided in that particular team’s circumstances, particularly when members from different professional disciplines encounter very different situations in their daily working lives resulting in different opinions about what should be done. Hence it is of utmost importance that everyone from every discipline participates in team communication in order to provide the best care:- a product of a synthesis of views diversity into a co-ordinated plan that is understood and accepted by all.

However, while it is proven that team approach results in greater productivity, creativity
and outcomes, any time you bring together people from differing backgrounds and experiences, it is inevitable that conflict will occur (Brockmann, 1996).

2.3.3 Benefits of Teamwork

For better understanding, the author would like to define teamwork. According to Palm et al., (1993) teamwork is a

"co-ordinated action carried out by two or more individuals jointly, concurrently or sequentially. It implies common agreed goals, clear awareness of, and respect for others' roles and functions. On the part of each member of the team, adequate human and material resources, supportive leadership, open, honest and sensitive communications, and provision for evaluations".

Palm et al., 1993)

Effective teamwork can be beneficial to both the patient and the professional provider:

**Patient:** Patients benefit better quality outcomes from a team approach of collaboration, coordination or cooperation which also enhances patient’s satisfaction and safety. Teamwork has impacted favourably on health surveillance; management of chronic diseases such as diabetes care, hypertension and asthma; terminal care and psychosocial impact of illness; cervical cancer screening; prevention care; reduced patients’ use of other practice services, the risk of toxicity and treatment failure, waiting times and
travelling costs for the patients. Again this is strongly demonstrated in the literature (Feiger & Schmitt, 1979; Wagner, 2000; Rubenstein et al., 1984; Wood-Dauphnee et al.; 1984 Van Weel, 1994; Palm et al., 1993; Parnell et al., 1993; Jewell & Hope, 1988; Gurney, 1999; Bradly, 1996; Macgregor, 1997; Hassell, 2000).

**Professional Provider:** Teams are particularly good at combining talents and providing innovative solutions to possible unfamiliar problems; in cases where there is no well established approach/procedure, the wider skill and knowledge set of the team has a distinct advantage over that of the individual (Headrick et al 1998). Ingram & Desombre (1999) emphasis that an effective team can be seen as a self-managing unit where fuller utilization of the work force is engendered particularly in decision making and its implementation, and problem solving. The team provides an environment where accountability is shared, thus providing a perfect motivator through enhanced self-esteem coupled with low level of stress as the team member is honoured with 'recognition of the worth of the individual'.

Hence, there are many advantages attributed to working in teams rather than working in isolation. This is strongly demonstrated in the literature by various authors (Adebajo & Kehoe, 2001; University of Texas [UT], 1996; Kaissi et al., 2003; Liang, 2002; Dicther, 2003; Rafferty et al., 2001; Bower, Campbell, Bojke & Sibbald, 2003). Different studies have also revealed compelling evidence that teams contribute to improved organizational effectiveness (Macy & Izumi, 1993; Kahleberg & Moody, 1994; Applebaum & Batt, 1994). Other advantages include better quality of care, lower cost of healthcare, higher
job satisfaction and less turnover of staff and absenteeism, increased staff motivation, improved collaboration and communication, lower job related stress and hence better psychological and well being of the staff.

2.4 Barriers to Teamwork

"In the beginning, God made an individual...... and then he made a pair.
The pair formed a team, together they begat others and thus the team grew. Unfortunately, working in a team led to friction, the team disintegrated in conflict and Cain settled in the land of Nod. There has been trouble with teams ever since".

(Witmer et al, 1995)

The above statement by Witmer et al (1995), is a widely-known bible story which according to Braithwaite (1995), still holds realistic principles with regard to teamwork in today’s era.

Various factors contribute to barriers to teamwork and not only the professionals working alongside one another. Structural, historical and attitudinal barriers also contribute to difficulties. Published literature provides evidence of problems which include:

1 Internal team factors: These include people’s inertia; satisfaction with the status quo; an inability to attract support for innovation; unclear objectives; lack of participation, and ambiguity and non commitment to team objectives ( Field &
West, 1995; Pritchard & Pritchard, 1994; Usherwood, et al., 1996)

2 Organisational structure: Different lines of management in teams can undermine attempts at teamworking. Added to this can be different payment systems, lack of any supportive overarching structure and inadequate staff and resources (West & Slatter, 1996; West & Pillinger, 1996; Audit Commission, 1992).

3 Size and location of teams: Team size can be a critical factor. Large teams with more than 20 members are less effective than smaller teams. Geographical separation can also be an issue for some teams (Poulton & West, 1999; Stott, 1995; Royal College of General Practitioners, 1995).

4 Time constraints: This relates to insufficient time for formal and informal meetings of the team and the contractual obligations of some important off-site team members leading to inappropriate level of contact to fulfill objectives as in the case diabetes care within the Primary Health Care.

5 Information sharing and confidentiality: There is potential for conflict between sharing information and preserving confidentiality. Uncertainty amongst professional about legal and ethical aspects of sharing important patient information amongst the team can create barriers (Dept of Health, 2000).
Conflicts: According to Thamhain and Wilemon (1975) conflict is any situation in which your concerns or desires differ from those of another person. This may never manifest in a scream fest because whoever notices or is aware of the difference in concerns or desires may never speak up. Or they may not speak up in the team meeting but they may talk to one or more team members once the meeting is over, usually not the person they have the issue with.

Conflicts in teams may make us think of overt signs of conflict, like heated discussions, yelling and screaming, aggressive or defensive non-verbals, perhaps even the threat of violence. Varney (1989) states that when we speak of conflict resolution, the message most people get is that conflict is bad and we want to get rid of it; two statements which are both partially myths. Conflict can be used to make the team and the team’s output better, argues Weiss (1997) and that conflict is only bad when it is not dealt with appropriately, usually because the people involved in conflict do not have the skills to effectively deal with conflict. It becomes really problematic when it becomes entrenched and personalized. Stulberg (1987) emphasized that the real problems occur when conflict is not surfaced or does not reach a resolution. Then it festers and usually turns personal. Team members find it more and more difficult to put issues on the table because of the personalization of conflict.

On the other hand, some authors such as Bowditch, (1997); Fisher et al, (1995) and Kezsborn, (1992), argue that the ability of a team to engage in conflict is a
valuable tool for the team and the organization. Conflict enables different perspectives to emerge around an issue or problem which then expands the way of looking at the problem and thus the possible solutions to the problem. Playing the Devil’s Advocate, for example, is a form of conflict that enables team members to build their argument or support for an idea while unearthing potential roadblocks that could be thrown in its path. Engaging in conflicting perspectives can be a resource for creativity within the team continues to add Coser (1956). Often ideas will be built out of conflict or concepts developed that wouldn’t see the light if wasn’t for the energy and synchronicity that comes out of conflict. So it is encouraged in many ways to bring the benefit of conflict to a team.

According to Rayeski and Bryant, (1994), a synergistic team is one that welcomes conflict, knows how to use it to their advantage and does not shy away from putting something on the table when they know it will generate conflict. The team members know how to walk away from each meeting feeling good about what happened in the meeting, no matter how intense the discussion may have been at times. When we shed our preconceived notions about conflict and it being bad, we open up the door to welcome the synergy that characterizes high-performing teams.

Walburg et al (2006) state that a team which is responsible for the healthcare process of the patients, meticulously defines and improves the process in order to improve the outcome of care. In this case the outcome improvement can best be
judged by the patients’ satisfaction with the quality of the service.

2.5 Teamwork in Primary Healthcare

In an era of ageing population with complex clinical and social needs, the spiraling costs of new high technologies, rising public expectations, increasing levels of chronic diseases, such as diabetes, and disabilities, as well as rapid developments in our ability to deliver more and more care outside hospitals and, not least, major new Government-led policy initiatives, make the understanding and removal of such ‘inhibitions’ in the field of primary healthcare an urgent priority (Muscat Azzopardi, 1999). Effective and economical utilization of resources towards delivering the best quality level of care wins priority. One needs to evaluate care systems, identify gaps and take action. These are some of the reasons why diabetes care in the State Primary Health Care is being investigated.

It is documented in the literature that the primary healthcare team is the first level contact of individuals, the family and the community with the national health system which brings healthcare as close as possible to where people live and work, and constitutes the first element of a continuing health process (Poulton & Lynch, 2000). Conversely, Howie JGR et al. (1992) stress that teamwork in primary healthcare seeks health advice, diagnosis and treatment for a range of health and social care problems and continue to argue that the team should be dynamic rather than static, whereby professional input changes to meet the changing needs of patients and groups of patients in different circumstances.
The idea that teams are important to modern organisations was established about 70 years ago (Guzzo, 1996). However, in only the last 15 years has the idea been seized and widely acted on by large numbers of organisations in the public and private sectors (Bradley M. 1996). However, in practice one might query how effective teams are within organizations. Teamworking within healthcare settings is thought to be more complex and difficult to achieve than is commonly understood. Both the structure and processes of primary healthcare have features that constitute barriers to interprofessional co-operation and collaboration and that impede effective team decision-making (Maznevski, 1994).

Macy and Izumi (1993) conducted an analysis of 131 organisational change studies in order to determine their effectiveness. Those interventions with the greatest effects on financially-related measures of organisational performance were team-related interventions. These also reduced turnover and absenteeism more than did other interventions, showing that team-oriented practices can have broad positive effects in organisations. Applebaum and Batt (1994) offer convergent evidence. They reviewed the results of a dozen surveys of organisational practices as well as 185 case studies of innovation in management practices. They too found compelling evidence that teams contribute to improving organisational effectiveness, particularly increasing efficiency and quality. Other researches provide evidence of the impact of team-based work practices on organisational performance. Kelleburg and Moody (1994) studied over 700 work establishments and found that those in which teamwork was developed were more effective in their performance than those in which were not used.
The importance of teamworking has been emphasised in numerous reports and policy documents in health service organisations. One recent document (NHSME 1993) particularly emphasised the importance of teamworking if health and social care for people in local communities were going to be of the highest quality and efficiency.

"We have so much more strength, and it is very cost-effective for both patients and the organization when we work as a team in a multidisciplinary environment than as individual scientists working in isolation".

(Stevenson, et al., 2001)

Primary care team working has been reported to improve health delivery and staff motivation (Wood, Farrow and Elliot, 1994) and to have led to better detection, treatment, follow-up and outcome in diabetes management (Adorian, Silverberg, Tomer and Wamosher, 1990). In a longitudinal study of 68 primary health care teams, Poulton (1995) found a clear relationship between teamwork and effectiveness. Those teams with high levels of clarity of team objectives and team members’ commitment to those objectives were more effective than those with unclear objectives.

However, despite these encouraging research studies, there is considerable evidence that the context of primary health care is such that there are substantial barriers to cooperation and collaboration in the delivery of primary health care. Bond et al (1985)
found little interprofessional collaboration in primary health care teams in their study of 309 paired professionals. West and Poulton (1995) examined primary health care team functioning in 68 practice teams and found that on all 4 dimensions of team functioning primary health care teams scored significantly lower than the other team types. West, Poulton and Hardy (1994) in a study of 9 primary health care teams identified structural, managerial and employment patterns in primary care as crucial in undermining the effectiveness of teamworking. These barriers to co-operation and collaboration need to be removed or reduced for teamworking to be effective in primary health care.

There are a number of key elements to effective teamwork (Guzzo and Shea, 1992):

- First individuals should feel that they are important to the success of the team. When individuals feel that their work is not essential in a team, they are less likely to work effectively with others or to make strong efforts towards achieving team effectiveness. Roles should be developed in ways which make them indispensable and essential.

- Individuals’ roles in the team should be meaningful and intrinsically rewarding. Individuals tend to be more committed and creative if the tasks they are performing are engaging and challenging.

- Teams should also have intrinsically interesting tasks to perform. Just as people work hard if the tasks they are asked to perform are intrinsically engaging and challenging,
when teams have important and interesting tasks to perform, they are committed, motivated and co-operative (Hackman, 1990).

- Individuals contributions should be identifiable and subject to evaluation. People have to feel not only that their work is indispensable, but also that their performance is visible to other team members.

- Above all there should be clear, shared team goals with built-in performance feedback. Research evidence shows consistently that where people are set clear targets at which to aim, their performance is generally improved. For the same reasons it is important for the team as a whole to have clear team goals with performance feedback.

In primary health care, by and large, the first three conditions for effective teamworking hold true. However, in primary health care teams it is rare for individual contributions to be measured and feedback on performance given. Moreover, primary health care teams tend not to have clear, specific objectives and goals, and feedback on performance against those objectives is rarely available. The development of teamworking in primary healthcare, therefore needs to focus on developing clear, shared objectives and on providing feedback on performance.
2.6 The role of teams in Diabetes

"In the gradual division of labour, by which civilization has emerged from barbarism, the doctor and nurse have been evolved".

Callaghan & Williams (1994)

The delivery of health care by a coordinated team of individuals has always been assumed to be a good thing. Friedman (1998) argues that patients reap the benefits of more eyes and ears, the insights of different bodies of knowledge, and a wider range of skills. Thus team care has generally been embraced by most as a criterion for high quality care. Despite its appeal, team care, especially in the primary care setting, remains a source of confusion and some scepticism (Pearson & Jones, 1994). Which disciplines are essential on the team? What do the team members other than the doctor do to support patient care?

With the aging of the population and the advances in the treatment of diabetes, teamwork in the context of chronic diseases needs to be re-examined. Successful diabetes care interventions usually involves a coordinated multidisciplinary care team (Calkins et al, 1998; Wagner et al, 1996; Wagner, 1998; Wagner et al, 1997).

2.6.1 Effectiveness of Diabetes Care Team

Effective team care for diabetes care often involves professionals outside the group of individuals working in a single practice; it may involves multiple practices, for example, primary and specialist care – or it may involve multiple organisations, such as a general
practice and a community agency. Pritchard (1995) argues that teams which cross practice or organisational boundaries may create communication and administrative nightmares but are essential for optimising care for many patients.

Most successful interventions in diabetes management entail the delegation of responsibility by the primary care doctor to team members for ensuring that patients receive proved clinical and self management support services (Calcins, et al 1998; Wagner, 1998; Wagner 1999). Bero et al. (2000) state that often the team is more effective with the addition of new disciplines, such as clinical pharmacy or nursing case management.

2.6.2 Effectiveness of Teams in chronic diseases

Starfield (1992) and other researchers argue that effective chronic disease programmes tend to exploit the varied skills of the team by using the following strategies.

- *Population based care*

  This is an approach to planning and delivering care to defined patient populations that tries to ensure that effective interventions reach all patients who need them (Wagner 1995). It begins with a protocol or guideline that defines the components (assessments and treatments) of high quality care. The steps required to deliver the interventions are specified and delegated to members of the team (Payne et al 1995: Taplin, 1998).
• **Treatment planning**

Treatment plans for each patient seem to be essential features of effective diabetes care programmes, and more formal, written plans help to organise the work of teams and help patients to navigate the complexities of multidisciplinary care. Plans that include patients' treatment preferences are more likely to result in satisfied, compliant patients (Delbanco 1996; Von Korff et al 1997).

• **Evidence based clinical management**

Advances in medicine have increased the number of chronic conditions that can be successfully treated but have also increased the complexity of regimens. The identification or addition of team members to achieve greater concordance with complex treatment protocols by providers and patients has significantly improved outcomes in several chronic conditions (Debusk et al, 1994; Greineder et al, 1999). One major advantage of non-medical staff may be that the legal constraints placed on their decision making increase the rigour with which they follow protocols. Becker et al (1998), for example, compared the effects of lipid management by nurses with the effects of primary care on the lipid concentrations of high risk patients. Even though both groups of professionals had access to guidelines and educational materials, patients randomised to the nurse intervention were 2.5 times more likely to reach their goal cholesterol concentration.

Moreover, an Australian study found that communication, care and reassurance, and professional attitudes and behaviours, each significantly correlated with patient
satisfaction. However, factors related to professional interpersonal skills were found to be very significantly correlated with patient satisfaction (Lewis, 1994).

- **Self management support**

  Growing evidence exists that educational and supportive interventions directed at helping patients to change risky behaviours or become better self managers improve outcomes across a range of chronic illnesses such as diabetes (Katon et al 1995). Effective interventions tend to emphasize the acquisition of skills rather than just knowledge and systematically try to bolster patients' motivation and their confidence in managing their condition rather than encourage dependency. Most doctors have neither the training nor the time to engage in counselling on behaviour change or to give self management support (Kottle et al, 1993). The advantages of the team having a nurse trained in behavioural counselling, or other professional, are illustrated by several studies (DeBusk et al, 1994; Rich et al 1995; Aubert et al 1998).

- **More effective consultations**

  The limitations of a brief consultation with a chronically ill patient, who will have multiple needs, are obvious. Clinics run for patients with similar needs, for example, asthma or diabetic clinics, are a part of medical practice in United Kingdom (Thorn, et al., 1973; Farmer, et al., 1990). Beck and colleagues (1997), studied “group consultations” for older patients in a randomised trial and found that such patients were more satisfied, more up to date in their preventive care, and used health services less often than comparison patients. They also state that group consultations may provide a
particularly efficient vehicle for the complementary functions of team care.

- **Sustained follow-up**

Close follow up ensures early detection of adverse effects, problems in compliance, failure to respond to treatment, and recrudescence of symptoms. It affords opportunities to solve problems and demonstrate the concern of the care team. Many of the successful interventions described above rely on a practice initiating follow up of patients. Randomised trials have shown the effectiveness of telephone follow up by nurses or other staff in chronic illness care (Wasson et al, 1992; Maisiak et al, 1996; Weinberger et al 1996).
2.7 The Chronic Care Model

Wagner, (1998) designed the Chronic Care Model for the diabetes care team to improve the outcome as shown in figure 2.1.

![The Chronic Care Model](image)

**Figure 2.1 Care model for chronic diseases such as diabetes**

The Chronic Care Model identifies the essential elements of a health care system that encourage high-quality chronic disease care. These elements are **the community, self-management support, delivery system design, decision support and clinical information systems**. Evidence-based change concepts under each element, in combination, foster productive interactions between informed patients who take an active part in their care and providers with resources and expertise. The model can be applied to a variety of chronic illnesses, such as diabetes care. The bottom line is healthier, more
satisfied providers, and cost savings.

2.8 Patient Satisfaction

This part of the literature aims to highlight the importance of patient satisfaction. It attempts to identify the factors that lead to satisfaction within the diabetes services in Primary Health Care. The importance of clients' satisfaction with the service to prevent patients from defaulting and from developing complications is supported in a study carried out by Mc Donald et al. (1999), where clinic waiting time and difficulty in getting an appointment were factors perceived as preventing diabetic patient's regular clinic attendance.

An Australian study found that communication, care and reassurance, professional attitudes and behaviours, and the physician as personal confidante to the patient, each significantly correlated with patient satisfaction. Also, tested was technical competence. However, factors related to professional interpersonal skills were found to be significantly correlated with patient satisfaction (Lewis, 1994). This is supported in nearly all studies, providing evidence that improving patient satisfaction requires a change in attitude on the part of professional staff (Avis et al., 1995; Draper & Hill, 1997; Gilbert et al., 1992; Healy et al., 1995; Lewis, 1994; Smith & Sanderson, 1992).

The information provided to patients is a second frequently reported correlate of patient satisfaction. Dissatisfaction is focused on both the amount of information offered, and the way it is presented (Draper & Hill, 1997; Bishop et al., 1991; Gilbert et al., 1992; Kenny
According to Wikblad (1991) the visits to the clinic may be found frustrating by the patient with diabetes, since he feels that the information is unsatisfactory. Several surveys of people attending diabetes clinics (24 per cent of 538 at nine study sites) have identified not having enough information as a common area of concern (Audit Commissioner, UK, 2000).

The length of time spent in the actual consultation has also been found to be an important factor in the level of satisfaction experienced by the patient (Avis et al., 1995; Bishop et al., 1991; Draper & Hill, 1997; Gilbert et al., 1992; Kenny, 1995; Lewis, 1994; Smith & Sanderson, 1992). In a study by Wikbald (1991) diabetic patients are aware of the lack of time devoted to consultation and therefore seldom start a discussion. In a qualitative study by Callaghan and Williams (1994) several participants with diabetes spoke of being frustrated by the lack of time available to them to discuss worries. When internal and external standards are placed on the length of waiting times in clinics, clinicians feel under greater pressure to reduce these aspects of consultation. Interestingly, one study found that the duration of waiting time was not a factor that produced great dissatisfaction in patients, provided they were kept informed of delays (Avis et al., 1995; Lewis, 1992). This is also supported by other studies, which have found that although waiting times influence patient satisfaction, information provided by staff on the reason for, and expected length of the wait, also improves patients satisfaction (Bishop et al., 1991; Smith & Sanderson, 1992).

Other factors of patient satisfaction most frequently appearing in studies (Lewis, 1994)
are availability of services of continuity of care. Lack of availability of parking in general, and parking for the disabled were also shown to be sources of dissatisfaction with clinic services (Commonwealth Department of Health & Family Services, 1996). According to an audit carried out to improve Diabetes Services United Kingdom (Audit Commission, UK, 2000), the lack of range of staff and resources in the same premises resulted in confusion to patients which caused dissatisfaction leading to patients not attending for reviews. Continuity of care (seeing the same doctor each visit) also increased satisfaction felt with consultations (Bishop et al., 1991; McDermott & Lempp, 1993). Relationship between patients and professionals is a need that many persons with diabetes find comfort in (Barendse et al., 1999; Wikblad, 1991). Many studies showed that the elderly tend to have higher satisfaction with care than the young, and different priorities in care. The main factor attributable to seeing the same doctor and being recognized by staff is important for elderly patients. This factor offers implications for investigation as there are many elderly diabetic patients attending the health centres.

2.8.1 Local Studies

In a study carried out by Calleja (1995) among patients attending the Government Health Services Outpatients’ Department locally, the respondents were invited to list down which factors were causing them most dissatisfaction, the attributes fell into five main groups. The rankings were excessive waiting, poor doctor-patient relationship, lack of cleanliness, lack of facilities in waiting area and lack of privacy. Excessive waiting was the most prominent attribute. In 1996, the Department of Primary Health Care (DPHC, 1996) handed a questionnaire to members of the public attending the various health
centres. Although the results showed high level of general satisfaction with the services provided, waiting time was the factor that 9 per cent of people described as not acceptable. The international literature review has similar attributes of factors causing dissatisfaction on a national level.

2.9 Quality of Service

"Best care wraps around the patient, rather than the patient fitting the care that is offered"

(General Medical Council, UK, 2001).

'Quality' is the big issue that is currently fashionable in healthcare circles in several industrialized countries. It has become one of the most prominent issues on the health policy agenda, a basic requirement in quality customer care. For instance, in the UK, the government's White paper on the NHS stresses that "the new National Health Service will have quality at its heart" (The Department of Health, 1997) and that "high quality of care should be the right for every patient", (The Department of Health 1998). In the United States, a Presidential Advisory Commission on Consumer Protection and Quality in the Health Care Industry (1998), has recently called for a national effort to improve and sustain the quality of health care as well as developed quality metrics.

Quality of care is a remarkably difficult notion to define, the criteria of quality are nothing more than aspects of a process called medical care (Donabedian 1986). As such, the definition of quality may be almost anything anyone wishes it to be, although it is,
ordinarily, a reflection of values and goals current in the medical care system and in the
larger society of which it is a part. Donabedian (1990), and Giese and Cote (2000) argue
that quality health care requires technical training and skills for service users to
understand and respond to customers' needs, while Eiglier and Langeard (1987) stress the
importance for improvement in the quality of care to be an ongoing and consistent
process.

Barnes et al (1994) stress that quality needs to be defined in order to measure it and
subsequently improve it. They suggest two simple, clear and easily remembered
definitions of quality:

- 'Quality is consistently achieving agreed requirements'
- 'Quality improvement is the continuous search for opportunities for all
  processes to get better'

Quality originated in the private sector because success or failure of the company
depends on their customers' satisfaction. A service company must offer reliable service
and help its customer to solve arising problems (Zeithaml et al 1990). This means a more
satisfied customer thereby improving customer-retention with resulting significant
benefits for the company. However, the importance of quality in the public sector has
become increasingly essential in order to keep up with the customer's expectations within
reasonable costs while governments are encouraged to keep their social and political role
(Kaul, 1998).
In the caring service within the public sector, quality must be assured in four main areas—economic, political, professional and social (Ellis, 1988). The economic level is important since the public sector is always under resource constraint and thus resources must be used in a cost-effective manner. This links to political implications since public services must be accountable for how public funds are being utilized. The importance of professionals offering quality service is implicit to professional duties since social pressures are becoming increasingly with a more demanding and knowledgeable consumer.

For good quality service to be maintained, it is required that quality improvement and quality assurance, which are two different phenomena, be secured (LeBlanc & Nguyen 1999). The terms “improvement” and “assurance” are interchangeable says Donabedian (2003). Quality improvement in organization involves the whole organization (Moss & Garside 1995) since the desired goals cannot be reached in a fragmented organization (Moss et al, 1999).

Le Blanc and Nguyen (1999) mention also that the physical environment associated with the service offered is expected by clients to be of a good quality. Wilson and Sheikh (2002) and Barach and Moss (2001) argue that adequate safety and comfortable measures should feature prominently in the health care settings.

Both Ritchie (2002) and Chow-Chua et al (2002) stress the need for knowledgeable
managers on the subject of quality, as well as being informed on evaluation methods applicable in their settings. Therefore, the necessary changes to move to a culture of quality is the responsibility of medical professionals, service providers, and managers in health care as well as the clients (Davies, Nutley & Mannion, 2000). Blair (2002) emphasised the need of the manager to act as the leader or catalyst for a good quality culture to be built in an organisation.

Teamwork attributes to quality in the delivery of service. However, a team passes through various phases before it starts contributing effectively and successfully.

2.10 Team Building versus Team Development

It is believed that there is a fundamental difference between team building and team development. This statement is strongly supported by Temkin-Greener (2004). He argues that in the early stages of team existence, the team probably lacks the history that long standing teams have. This history is often the glue that holds a team together and consequently new teams often require team building to give them shared experiences to draw upon. Team development on the other hand is more suited to existing teams that are undergoing, or are about to undergo, change. This could be a change of scope, personnel, working methods, management etc. Team development is specifically aimed at meeting an identified need to help the team deliver its goals. Additionally, Rothman & Wagner (2003) state that quality and equality’s areas of expertise in team building and team development help to sustain constructive working styles for productive synergy within
teams especially those that are often temporary and changing as in Fig 2.2

Fig 2.2 Model 1 of Team Development

2.11 The distinguishing factors

According to Varney (1989) team building is most often regarded as a short-term, one-time intervention that is designed to promote effective communication and problem-
solving skills. The timely development of these skills may play an important role in the current success of the team. On the other hand, team development is employing a broad based, far reaching and future oriented plan for the development of a team’s soft and hard skills. The ongoing development of these skills may play a role in the future success of the team. Differences between team building and team development is illustrated in table 2.2.

Table 2.2 Differences between Team Building and Team Development

<table>
<thead>
<tr>
<th>Team building is:</th>
<th>Team development is:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Short-tem focused</td>
<td>Long-term focused</td>
</tr>
<tr>
<td>Soft skill oriented</td>
<td>Soft &amp; hard skill based</td>
</tr>
<tr>
<td>Activity specific</td>
<td>Activity &amp; strategic planning oriented</td>
</tr>
<tr>
<td>Intervention</td>
<td>Prevention</td>
</tr>
<tr>
<td>A component of a team’s</td>
<td>Driving the development process</td>
</tr>
<tr>
<td>development process</td>
<td></td>
</tr>
<tr>
<td>Management driven</td>
<td>Leadership inspired</td>
</tr>
<tr>
<td>Acting as a carpenter</td>
<td>Serving as an architect</td>
</tr>
</tbody>
</table>

Diabetes care is complex because successful outcomes result from an effective interaction of expert knowledge between multi-professional providers. More can be achieved quicker with less effort if the providers communicate and coordinate with each other within a developed team (Fisher et al, 1992).

Traditionally some teams have been collaborative working groups rather than teams. Chow-Chua & Goh (2002) explain more about this theory in figure 2.3. They argue that the greater the uncertainty in the task and environment, the greater the need for people to
work together in high performance team.

Figure 2.3 Model 2 of Team Development

2.12 Stages of Team Building

Tuckman (1965) explains that all groups go through a series of stages of development before performing in an effective manner and a team develops from individuals through a series of shared experiences of its members. He identifies four stages of team development that have been adopted: Forming, Storming, Norming and Performing. Tuckman (1977) continues to say that as the team develops maturity and ability, relationships establish, and the leader changes leadership style. Beginning with a directing style, moving through coaching, then participating, finishing delegating and almost detached. Similarities can be seen with other models, such as Tannerbaum and Schmidt Continuum, and especially with Hersey and Blanchard’s Situational Leadership model, which were developed about the same time.
Table 2.3 shows the implications of each of the four stages of the Tuckman’s model for team leaders:

Table 2.3  Stages of Team Building

<table>
<thead>
<tr>
<th>Team Leader’s Style</th>
<th>Forming</th>
<th>Storming</th>
<th>Norming</th>
<th>Performing</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>More directive approach, outlining how the process will develop and laying down a clear structure.</td>
<td>Leader needs to be supportive, actively listening to team members, and managing the conflict, generating ideas, and explaining decisions.</td>
<td>Leader acts as a team member, as leadership is starting to be shared. Leader helps to develop consensus.</td>
<td>Leader takes overview, but within the day to day running, the group is sharing leadership between members.</td>
</tr>
<tr>
<td>Reaction to Leadership</td>
<td>Team members take a tentative, wait and see approach. Leader will be allowed to lead, but that doesn’t guarantee support.</td>
<td>Leader is under pressure from more vociferous team members.</td>
<td>General support for the leadership within the team. Mutual respect underpins this.</td>
<td>Personal relationships have developed which underpin the leadership relationship.</td>
</tr>
<tr>
<td>Team Process</td>
<td>Process is driven by the leader. Some people are reluctant to contribute openly.</td>
<td>Process likely to break down until conflict is resolved.</td>
<td>The core process should operate smoothly, although there is a danger of focusing on smaller process issues rather than core team work.</td>
<td>Process functions well, and is adjusted as necessary. Leadership is shared and tasks delegated.</td>
</tr>
<tr>
<td>Trust within the team</td>
<td>Individuals are not clear about their contribution. “Getting to know you” phase. Trust may start to be built.</td>
<td>Trust is focused into smaller groups as sub-groups and alliances form.</td>
<td>As roles are accepted and clarified, trust and relationships start to develop to a greater degree.</td>
<td>Team starts to operate on higher levels of trust as loyalty and relationships develop.</td>
</tr>
<tr>
<td>How Decisions are made</td>
<td>Nominated leader is expected to make decisions. Some more vocal members may dominate.</td>
<td>Decisions are hard to make. Members are unwilling to give way. Compromise is a frequent outcome.</td>
<td>Group is able to come to common decisions. Win-win is more likely than compromise.</td>
<td>Decision making is easier - some decisions are delegated to sub-groups or individuals.</td>
</tr>
</tbody>
</table>
According to Tuckman (1965) team building is a transition from groups to teams, with the primary goal being to increase performance, by boosting morale, esprit de corps, and the value of diversity. He continues to argue that when a team is in the performance stage, production is high and the team climate is positive. Member attitudes are characterized by positive feelings and eagerness to be part of the team, are confident about the outcome, enjoy open communication, exhibit high energy, and disagreement is welcome and handled without emotional conflict. Research by Lewis (1994) has also shown strong links between the climate in which people work, their level of performance and patients’ satisfaction.

2.13 Team climate
According to Smith et al, (2000) organizational climate can be described as ‘the written rules’ or ‘the way things are around here’. It is a complex blend of culture, attitudes, expectations, policies and norms that effect motivations and behaviours. Within every team or workgroup a micro-climate also exists and factors such as leadership style, levels of trust, empowerment and bureaucracy all contribute. Teams, entire departments and whole organizations all respond to internal climate and depending on the climate that exists, their response will be positive or negative.

As the group of individuals builds into a team, it is highly influenced by the culture, climate and norms which vary with every organization. In this study team building will be assessed mainly by following Tuckman’s model of teambuilding, team climate by Anderson and West (1998) and patient’s satisfaction by Aragon, (2000). Based on these
principles, the following theoretical model (Figure 2.4) will be used as theoretical background upon which the diabetes team will be investigated.

**Figure 2.4: Theoretical Framework/Model**
*(Structural Mode of the study)*

**INPUT**
- Team Structure/Composition
- Forming
- Storming
- Norming
- Performing
*(Tuckman, 1965)*

**TEAM BUILDING**

**PROCESS**
- Participation
- Support for ideas
- Objectives
- Team task style
*(Anderson & West, 1998)*

**TEAM CLIMATE**

**OUTCOME**
- Patient satisfaction with service of:
  - Physician
  - Nurse
  - Chiropodist
  - Dietician
  - Diabetes specialist
  - Waiting times
  - Overall service
*(Aragon, 2000)*

The following hypothesis will therefore be tested to evaluate the effectiveness of the diabetes teamwork:

**H1:** There is a statistically significant difference between the three health centres on team
building stages, team climate and patient satisfaction.

H2: Those centres that are more norming and performing have higher levels of team Climate.

H3: Team climate is associated with higher levels of patient satisfaction.

2.14 Conclusion

Patient care teams in primary health care have the potential to improve the quality of care for patients with diabetes if the roles of team members are clearly defined and explicitly delegated, and if team members are trained for their roles. But the presence of a trained team may be of little help if professionals cannot share care effectively or if practice's lack of organization limits the availability of staff to work in these complementary roles (Pearson & Jones, 1994). With appropriate training and effective teamwork, primary care teams make it possible to manage complex diabetes comprehensively without losing the benefits of comprehensive, continuous primary care (Starfield, 1992; Becker, et al., 1974; Wasson, et al., 1984).
3. METHODOLOGY

3.1 Introduction

After going through the literature to establish the concept behind teamwork and effectiveness in the diabetes care in the community, this chapter looks at the research methods used to gather and evaluate the data. This chapter highlights the research setting and the target population. It discusses the research design and research tools used and justifies their use. It also mentions validity, method of data analysis, piloting and the problems encountered.

3.2 Research Setting

As already indicated in the first chapter, this study investigated teamworking in the diabetes care in the Maltese State Primary Health Care setting. The researcher opted to undertake this study because the majority of diabetic cases are managed in the health centres as compared to the Out Patient Department in St. Luke's Hospital (SLH), Malta. Clinical support from secondary care is only obtained when the need arises as commented by the nursing officer in charge of the Diabetes Department in St. Luke's Hospital (SLH). However, it has also been decided by the top management that diabetic patients' management will be extended to the local councils in the nearby future. In fact, pilot studies of this project are already underway. This decision continued to urge the need to investigate the quality of teamworking that currently exists in the care system.
The diabetes service is provided from seven health centres in Malta, that is, Mosta, Floriana, Rabat, Gzira, Qormi, Paola and Cospicua, from Monday to Friday. People with diabetes are primarily referred to the diabetes clinic at St. Lukes's Hospital, through Primary Health Care Department or private practice, to be investigated and to confirm their diagnosis, and then referred back to the Primary Health Care Department to be followed up.

### 3.3 Study Design

The study was a cross sectional study using mixed approach methodologies, that is, both quantitative and qualitative approaches. Quantitative methods, which are widely used for health services research (Pope & Mays, 1995), are suitable for such investigative case studies which study in detail real life interventions and thus are better able to capture different views from different groups of people (Keen & Packwood, 1995).

Qualitative studies seek to gain more information about characteristics within a particular field of study (Burnes & Gove, 1995) which in this case is a population of a diabetes team members and patients utilising the service of the diabetes clinics within the health centres.

In addition, the conjunctive use of quantitative and qualitative methods of data collection aids to give rigour, credibility and validity (Johnstone, 2004; Keen & Packwood, 1995). This is the use of more than one independent method of measuring in order to reduce uncertainty and personal biases (Bowling, 2002). This combined method is useful in that
it helps to build a wider perspective of the social setting being investigated (Pope & May, 1995). Validity of the study is further attained by means of triangulation, where data is gathered from multiple interest groups within the team and the patients in order to get an overall interpretation of the social setting and analysed against the literature review.

Two psychometrically validated instruments were used to collect the relevant data for this study in a most effective and efficient way and hence serve the purpose to analyse and identify gaps which can lead to determine where improvement is needed and in what way (Patton, 1987).

One of the tools used to investigate the team members consisted of a questionnaire developed by Anderson and West (1998) which analyses the team climate, and a questionnaire by Tuchman which focuses on team building. Additionally, Patient Satisfaction questionnaire that was developed by Aragon (2000) was distributed to diabetic patients to investigate their level of service satisfaction. Both questionnaires provided interesting and valuable information to the researcher.

The questionnaires included open-ended questions for comments and opinions. According to Polit and Hungler (1993) many structured questionnaires include some open-ended questions so as to allow participants to respond in their own words.
3.4 Data Collection of Team Members

3.4.1 Research Design
As already stated, the design of this study was a cross-sectional study. One questionnaire was distributed among the multidisciplinary professionals: physicians, nurses, chiropodists, dieticians, endocrinologists and ophthalmologists, who were involved in the planning and management of diabetes care. The questionnaire was distributed by hand by the researcher herself during the month of March 2007.

3.4.2 Target Population
The researcher intended to study the multidisciplinary care groups that are mainly involved in the care of the diabetic patients as mentioned above. The endocrinologists and dietician are stationed in St. Luke’s Hospital (SLH). As a routine, the endocrinologists usually pay two annual visits to the Health Centres but those patients who require their advice outside these visits are referred to SLH. The other professional providers are deployed within the Primary Health Care Dept.

3.4.3 Sampling Technique
The number of professional carers selected for the study was kept low due to the limited number of dieticians, only one deployed in the Health Department, to attend to diabetic patients in the Health Centres, and also due to the fact that only three chiropodists were deployed at Mosta, Paola and Floriana Health Centres. For this reason, the number of physicians and nurses considered for the study was limited to four participants from each
discipline in order to try to establish similarity in numbers for comparative reasons, and make a more realistic attribution in case any differences existed.

3.4.4 Research Tool

For the sake of data collection for this study, the researcher made use of two tools as already discussed. The tool to investigate the team members was a combination of questionnaires, Team Climate Inventory and, Leadership and the Tuckman Model, while that of the patients was A service satisfaction questionnaire (see Appendix 1).

1. Team Climate Inventory (Anderson & West, 1998).

Here the questions focused mainly on the extent to which the team members have participated in the team, the attitudes of the team towards change, understanding of the team’s objectives by its members, and their perceptions regarding the level at which the team monitored and appraised the work it does. Each statement / question was rated by the participant according to the degree of agreement. Example:

```
Strongly disagree neither agree agree strongly
Not disagree agree

"We have a 'we are in it together' attitude. [ ] [ ] [ ] [ ] [ ]
```


As the name of the model clearly indicates, the objective of this tool is to identify the present stage of the teamwork model that the team is presently operating in. This questionnaire contains statements about teamwork. Example:
"We try to have set procedures or protocols to ensure that things are orderly and run smoothly (e.g. minimize interruptions, everyone gets the opportunity to have their say)."

Next to each question, the participant indicates how often his/her team displays each behaviour by using the following scoring system:

- Almost never - 1
- Seldom - 2
- Occasionally - 3
- Frequently - 4
- Almost always - 5

3. A service satisfaction questionnaire: This questionnaire is The Press Ganey Emergency Room Survey which scores patient responses on a 5-point scale, from 'strongly disagree' to 'strongly agree'. The tool's internal consistency was documented as alpha = .92, in a previous research with the theme: "A Patient Satisfaction Theory and Its Robustness Across Gender in Emergency Departments: A Multigroup Structural Equation Modeling Investigation (Aragon & Gesell, 1997).

3.4.5 Data Collection Method

The researcher made personal contact with the professional participants and then visited their place of work to distribute the questionnaire together with a written consent form, in
separate sealed envelopes. After a week, the researcher went back personally to collect the consent form and the filled in questionnaire from the participants.

### 3.5 Data Collection of Diabetic Patients Participants

#### 3.5.1 Research Design

A service satisfaction questionnaire was distributed to diabetic patients who were selected to participate. The questionnaire was sent to the patients during the last week of March 2007, at the same time during which the questionnaire was distributed to the team members. The latter was distributed personally by the researcher, as described earlier, while the service satisfaction questionnaire was distributed by the diabetes nurses who run the clinics at Paola, Floriana and Mosta Health Centres.

The researcher came to an agreement with the diabetes clinic nurses to contact by phone the randomly selected patients. A consent form was then sent to all those volunteering to participate. Following receipt of the endorsed consent form, a questionnaire together with a self-addressed envelope (address of the catchment Health Centre), were then mailed to the participants.

#### 3.5.2 Target Population of patients suffering from Diabetes Mellitus

In this study, the accessible population, that is, the portion of the target population to which the researcher had reasonable access (Burnes & Grove, 1993) included diabetic patients who have attended the diabetes clinics in the three major health centres of Paola,
Floriana and Mosta during the last year, that is, from 1st January 2006 to 31st December 2006. The reason was that only the records of the personal details of those patients attending during the last year were available on a register at the diabetes clinics and which could be accessed.

The researcher chose to consider those three clinics because they are situated in the North, Central and South of Malta and hence it was more likely that all possible sociodemographic characteristics were included in order to increase representativeness of the sample.

As stated earlier in the Introductory chapter, the number of diabetic patients attending the Maltese Primary Health Care is quite large but only 90 patients were considered for this study. This was due to a restricted number of male patients in one of the diabetes clinics under study. Only five males, in the age group of 'between 40 and 60 years of age', were found to have attended the diabetes clinic at Floriana Health Centre. Since the researcher intended to study an equal number of males and females from each age group in order to be able to make a more realistic inference of the findings, the maximum number of diabetic patients for this study couldn't exceed 90 participants.

The subject inclusion criteria for this study were:

1. Both type 1 and type 2 diabetic patients
2. Age groups: 40 to 60 years
   61 to 75 years
3.5.3. Sampling Technique

The list of patients attending the clinics as recorded in the register was filtered to eliminate those patients reported deceased or their names were included more than once which meant that the patient paid more than one visit during that same year. The patients were then stratified by age group, gender and Health Centre. The *first five* participants were selected from each gender-age-group-health centre stratum. The following figure, 3.1 gives a clear picture of how the sample was formed.

**Figure 3.1 Sample of patients stratified by health centre, gender and age group**

```
Maltese Primary Health Care Department

Mosta Floriana Paola

Age Groups (Males & Females):
- 40 to 60 years
- 61 to 75 years
- 76+ years

*Note:* The first five patients were chosen from each age group and sex from every Health Centre
```

3.5.4. Research Tool

The research tool distributed to the patient participants was a structured questionnaire which consisted of 25 questions. The respondent took about 15 to 20 minutes to
The information was collected mainly through close-ended questions so as to make it simpler, quicker and easier to answer by ticking the right box, or rated statements where the participant had to respond by choosing the correct rate. This information focused mainly on the services they receive from the clinic.

The questionnaire was written in simple terminology. It was translated in Maltese (Appendix 2) and back translated into English (Appendix 3) so as to ensure that both the Maltese and the English versions gave the same meaning. Each version was printed back to back on the same sheet of paper. This gave the patients the opportunity to choose their preferred language and hence increase level of reliable response.

3.5.5 Data Collection Method

The questionnaire together with the consent form was posted to the patient to be filled in and then returned directly to the researcher in the mail, sealed in the provided self-addressed and stamped envelope. The patients had a period of one week to fill in the questionnaire and return it to the researcher.

3.6 Data Analysis Techniques

All possible answers to both the questionnaires were coded by assigning numerical codes to them. Since coding is the process by which participants are classified into meaningful categories, the initial rule of coding is that the numbers must make intuitive sense. For example, higher scores on a variable were assigned higher codes than lower scores. This was most easily demonstrated with interval-level variable. However, for some variables
(nominal ones), by definition, there is no intuitively pleasing rationale for assigning numbers as someone with a gender of 'female', does not have more than one with 1 'male'. Overall satisfaction, attitudes, and knowledge sections were measured through the rating scores. The numerical codes that accompanied these categories interpret the intensity of the response categories. In order to maintain reliability of the coding, numerical codes were confined to those starting with 0 and increasing by 1 unit over each category. Blank answers were also coded. This helped later on to minimise the risk of miscoding. The data was inputted into a Microsoft Excel Spreadsheet and then transferred to SPSS v.11 (Special Package to Social Science). The results were tabulated for descriptive purposes. Most of the analyses were non parametric.

Communication contents obtained from open-ended questions were analysed qualitatively (Polit & Hungler, 1993). The researcher attempted member checking through peers, to establish credibility of the qualitative data. According to Coffey and Atkinson (1996) member checking is a particular important technique for establishing the credibility of qualitative data.

3.7 Pilot Study

The questionnaires which were distributed to both the team members and the patients were modified by the researcher and adapted for use within the local context. After they were translated in Maltese and then back translated into English, they were piloted for validity and reliability.

For validity testing, the staff questionnaire was given to some colleagues for feedback.
Their suggestions were considered and the questionnaire modified to improve its validity. Reliability testing was carried out during the third week of February and repeated with the same participants during the third week of March.

Reliability testing was carried out at Qormi and Gzira Health Centres (these two Health Centres were not included in the study) The sample of professionals participating in the pilot study was made up of two chiropodists, five physicians and five nurses for each questionnaire (English and Maltese version). The researcher made sure that these professionals did not form part of the study sample. This ensured that contents of the questionnaire were not prematurely released to the population of interest thus resulting in bias. In addition owing to the limited population size, members of the diabetes team could not be sacrificed for pilot study as this would not have made them eligible to participate.

The researcher, once more, identified a small number of patients attending the diabetes clinics at Gzira and Qormi Health Centres (twelve from each clinic) who volunteered to participate in the reliability testing. The Maltese version was distributed at Gzira Health Centre while the English version was distributed at Qormi Health Centre. This was done to test the proper understanding of both the languages since in the local culture the English language is more commonly practiced in Gzira while the Maltese language more commonly practiced in Qormi. Table 3.1 demonstrates the distribution of the questionnaires to patients and team members in the pilot study:
Table 3.1 Pilot study sampling

<table>
<thead>
<tr>
<th>Patients Sample</th>
<th>Gżira</th>
<th>Qormi</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Maltese Version)</td>
<td>(English Version)</td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>Females</td>
<td>Males</td>
</tr>
<tr>
<td>40 to 60 years</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>61 to 75 years</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>76+</td>
<td>4</td>
<td>4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Team Members Sample</th>
<th>Gżira</th>
<th>Qormi</th>
</tr>
</thead>
<tbody>
<tr>
<td>(Maltese Version)</td>
<td>(English Version)</td>
<td></td>
</tr>
<tr>
<td>Chiropodist</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Doctors</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Nurses</td>
<td>5</td>
<td>5</td>
</tr>
</tbody>
</table>

The researcher distributed each questionnaire twice to the same participants (patients and providers), spaced by a three weeks time period. Hence, to serve this purpose, the details of the participants were recorded. Responses from first and second questionnaires were then compared to test the reliability of the tools.

The pilot study enabled the researcher to examine if the questionnaire (in both English and Maltese language) was properly understood. It also helped to verify that the appropriate data was being collected and that analysis of the data was possible.

3.7.1 Pilot Study analysis

The Chronbach Alpha testing of both questionnaires gave the following results as shown in table 3.2:
Table 3.2 Chronbach’s alpha tests of piloted tools

<table>
<thead>
<tr>
<th></th>
<th>Chronbach’s Alph Measure</th>
<th>Health Centre</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Alph</td>
<td></td>
</tr>
<tr>
<td>Patient Satisfaction Quest.</td>
<td>Maltese version</td>
<td>Gzira</td>
</tr>
<tr>
<td></td>
<td>0.945</td>
<td></td>
</tr>
<tr>
<td></td>
<td>English version</td>
<td>Qormi</td>
</tr>
<tr>
<td></td>
<td>0.99</td>
<td></td>
</tr>
<tr>
<td>Team Members Quest.</td>
<td>Maltese version</td>
<td>Gzira</td>
</tr>
<tr>
<td></td>
<td>0.914</td>
<td></td>
</tr>
<tr>
<td></td>
<td>English version</td>
<td>Qormi</td>
</tr>
<tr>
<td></td>
<td>0.943</td>
<td></td>
</tr>
</tbody>
</table>

Wilcoxin paired test on every question pair was carried out and no significant difference was observed, except for question 6_21 in the team questionnaire which stated:

“There are many abstract discussions of the concepts and issues, which make some members impatient with these discussions”.

This statement was changed to:

“Many concepts and issues are discussed in an abstract way which make some members impatient with these discussions”.

Other major changes made included:

1. Removal of technical words in order to make the questions more understandable.
2. Section 3 of the patient satisfaction questionnaire, which dealt with the personal status and support of the participant was reworded and regrouped in a simpler manner to ensure a more common understanding among those participating.
3. At the end of each questionnaire a section for comments/suggestions was included.
3.8 Validity and Reliability Issues

Instruments to be used for collection of data must first be tested for validity and reliability. Validity is defined as “the degree to which the instrument measures what it is intended to measure” while reliability is the “degree of consistency or dependability with which the instrument measures the attribute it is defined to measure” (Polit & Hungler, 1989; Parahoo, 1997).

The tool adapted by the researcher for the local context and used on the patients participants was made available in both Maltese and English language. Face validity was confirmed by giving the questionnaire to subjects who were similar to the chosen sample so as to test it for understandability and accuracy. The researcher attempted to achieve content validity by asking questions which included all the aspects relevant to the literature review and by obtaining advice from an experienced researcher on the relevance of the content.

Nieswiadomy (1998) stated that by means of a pilot study “the researcher can determine the feasibility of the study, test the instrument that will be used, gain experience with the methodology and instrument and identify any potential problems in data collection” It tests the reliability of the questions asked (Polit & Hungler, 1991; Parahoo & Reid, 1998).
3.9 Ethical Issues

Ethical considerations entailed obtaining permission to carry out this research from the Director of the Primary Health Care department, and the diabetes nurses to identify the patients that can participate in this study.

Written informed consent from the team members and the patients was obtained to fill in the structured interview and to access the patients' personal file if the need arises. The patients were informed about the aim of the study, their right not to participate and that whether they participate or not will have no effect on the service they or their family receive. The consent form was also produced in both English and Maltese.

Anonymity was safeguarded due to the choice of using a mailed questionnaire for the patients as data collecting method. However, the questionnaire filled by the team members was collected personally by the researcher in a sealed envelope. This method was preferred in order to guarantee full response since the sample was rather small. The researcher made sure that the data provided by the participants was used only for the purpose of the research study.

Bowling (2002) stated that consideration must be given to the subjects' time and energy to make sure they are as free from constraints as possible, if they opt to participate. The questionnaire was mailed to the patient and allowed a week time to fill it in at their convenience. Same time was allowed to the professionals after personal distribution of the questionnaire in order not to interrupt the service.
3.10 Conclusion

This chapter described the research tools and methods of data collection and analysis in order to justify their use in relation to the research setting, design and the target population. The next chapter gives a detailed description of the results obtained by means of the methodology described.
4. RESULTS

4.1 Introduction

This chapter will present the results of both the quantitative and qualitative data collected, and analysed as indicated in the previous chapter. The research tools described in the previous chapter have been used to satisfy the aims of the study, namely assessing the effectiveness of teamwork in the diabetes care, to identify discrepancies in the service and in the team, and draw up recommendations for improvement of diabetes care and enhancement of patient satisfaction.

PART 1

4.2 Results obtained from team members regarding teamworking

4.2.1 Demographic Data

Due to the limited number of dieticians (only one person), and chiropodists working within the health centres, the number of doctors and nurses had to be restricted in order to be able to make real inference of any variations that existed. This was discussed earlier on in the methodology chapter.
In order to maintain confidentiality, the three Health Centres involved in this study will be referred to as Health Centres A, B and C.

All eligible professionals volunteered to participate, except the ophthalmologist at Health Centre A, who was away from the place of work during the data collection phase, and one of the three endocrinologists who opted to hand in an empty questionnaire.

Questions 1 to 4 of the questionnaire focused mainly on demographics and qualifications information.

By gender, 20 (51.3%) of the investigated professionals were males and 17 (43.6%) were females. Figure 4.1 shows the overall number of team members who participated in action in all the three Health Centres, that is in Centre A, B and C. Categorisation is according to their profession.

Furthermore, for comparative reasons, the multidisciplinary samples from the different centres were kept similar. Each sample was made up of 4 (30%) doctors, 4 (30%) nurses, 3 (28.2%) chiropodists and 1 (10.8%) ophthalmologist, except at Health Centre C were only 2 chiropodists are employed. The sample also included 3 endocrinologists who visit the health centres bi-annually from main general hospital to see the patients, and one dietician (Figure 4.1).
Figure 4.1 Frequency distribution of team members by health centre

Age distribution by profession can be seen in Figure 4.2. All team members were between 25 and 56 years of age. The chiropodists were the only professionals who, by age, all fell within the lower age group, that is, between 25 and 34 years of age, while most of the other professional staff covered the whole range of age groups.
Overall, the participants claim that they keep themselves updated by accessing the internet, journals, articles, conferences and by attending short and long courses.

The qualifications of the diabetes care providers are graphically displayed in Figure 4.3, where most had a Diploma, followed closely by those with a first degree.
4.2.2 Response by the diabetes care providers to aspects related to teamwork

4.2.2.1 Section 1: Teamwork

Question 5a enquired if the participants work in a team. Eighteen (46.2%) respondents answered "yes" meaning that slightly under half of the respondents perceive that they work in a team. Furthermore, when participants were asked if they agree that working in a team would improve the diabetes care, out of 37 (94.9%) professionals, 19 (48.7%) agreed. Only 1 (2.6) participant disagreed to this.

Figures 4.4 and 4.5 show the details of participants in both Team and non Team groups.
The participants who agreed to be working in a team had to answer questions 5b; c & d.

The response obtained was presented in Table 4.1.
Table 4.1 Frequency (in number and %)

<table>
<thead>
<tr>
<th>Question</th>
<th>No   N (%)</th>
<th>Yes  N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>If the team have clear objectives</td>
<td>3 (7.7)</td>
<td>15 (38.5)</td>
</tr>
<tr>
<td>If the team have to work closely to achieve the team's objectives</td>
<td>3 (7.7)</td>
<td>15 (38.5)</td>
</tr>
<tr>
<td>If the team discuss regularly its effectiveness and how it could be</td>
<td>14 (35.9)</td>
<td>4 (10.3)</td>
</tr>
<tr>
<td>improved</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Out of 18 (46.2%) professionals who claim that they work in a team, 15 (38.5%) state that they have clear objectives and as team members, they work closely together to attain the objectives of the team. However, the other 3 (7.7%) disagree to this. At the same time, 14 (35.9) professionals who see themselves as members of a team say that the team does not meet on regular basis to discuss the level of its effectiveness, and to identify together possible ways of how it could be improved. Meanwhile, another 4 (10.3%) claim that their team meets to discuss issues of effectiveness and any possible improvements.

Question 5e enquired about the number of core members that forms their team. The majority of the professionals, that is 13 (33.3%) out of 18 (46.2%) team members, state that they work in a small group (2 to 5), while another 4 (10.3%) state that they work in larger groups. The response to this question is demonstrated in Table 4.2.

Table 4.2 Response to team sizes

<table>
<thead>
<tr>
<th>Group size</th>
<th>N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 to 5</td>
<td>13 (33.3)</td>
</tr>
<tr>
<td>6 to 9</td>
<td>1 (2.6)</td>
</tr>
<tr>
<td>10 to 15</td>
<td>1 (2.6)</td>
</tr>
<tr>
<td>&gt; 15</td>
<td>2 (5.1)</td>
</tr>
</tbody>
</table>
4.2.2.2 Section 2: Team Building

This section focuses mainly on the four basic stages of team building. Overall descriptive statistics of closed questions related to the basic stages of forming, storming, norming and performing, show that the teams collectively in the health centres are experiencing all four stages simultaneously. This is indicated by the mean values which fall within confidence interval as highlighted in Table 4.3. (A more detailed frequency table at appendix 6)

| Table 4.3 Overall mean values for Tuckman’s four stages of team building |
|-----------------|-----------------|-----------------|-----------------|-----------------|
| Stage      | Mean (95% CI)   | Confidence Interval |
| Forming    | 2.85 (2.62, 3.09) | (2.62, 3.09) |
| Storming   | 2.67 (2.41, 2.90) | (2.41, 2.90) |
| Norming    | 3.06 (2.78, 3.34) | (2.78, 3.34) |
| Performing | 3.45 (3.15, 3.81) | (3.15, 3.81) |

Furthermore, analysis of data per health centre indicates that every individual team is also operating in a status of all four stages. Comparison between the teams using Kruskal-Wallis test identified variations. The individual centre means are illustrated in Table 4.4.

Norming varied significantly by centre (p=0.042). In fact it was noted to range between 2.55 in Centre B, up to 3.42 in Centre A. Performing also varied significantly (p=0.031), in fact, Centre B scored much less than the other centres.

| Table 4.4 Comparison of team building stages between health centres |
|-----------------|-----------------|-----------------|-----------------|-----------------|
| Health Centre  | Forming p value 0.75 | Storming p value 0.23 | Norming p value 0.04 | Performing p value 0.03 |
| A              | 2.83             | 2.69             | 3.42             | 3.83             |
| B              | 3.00             | 2.98             | 2.55             | 2.83             |
| C              | 2.75             | 2.40             | 3.08             | 3.60             |
4.2.2.3 Section 3: Team Climate

**Participation:** In general, the majority of the professionals 18 (46.2%) who work in a team are in agreement with the various statements included in this section. These statements focus mainly on attitudes and sharing, for example:

"We have a 'we are in it together attitude'" and

"There are real attempts to share information throughout the team"

These two statements scored highest under 'agree' (10, 25.6% each) as can be illustrated in Table 4.5.

**Table 4.5 Frequency in number and percentage of statements related to team participation**

<table>
<thead>
<tr>
<th>Statement concerned with how much participation there is in your team</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;we are in it together attitude&quot;</td>
<td>N (%)</td>
<td>N (%)</td>
<td>N (%)</td>
<td>N (%)</td>
<td>N (%)</td>
</tr>
<tr>
<td>Keep team informed with relevant issues</td>
<td>0 0</td>
<td>0 0</td>
<td>3 7.7</td>
<td>5 12.8</td>
<td>7 17.9</td>
</tr>
<tr>
<td>Understood &amp; accepted by each other</td>
<td>0 0</td>
<td>0 0</td>
<td>2 5.1</td>
<td>5 12.8</td>
<td>7 17.9</td>
</tr>
<tr>
<td>Real attempts to share information</td>
<td>0 0</td>
<td>0 0</td>
<td>3 7.7</td>
<td>4 10.3</td>
<td>7 17.9</td>
</tr>
<tr>
<td>Give and take attitude</td>
<td>0 0</td>
<td>0 0</td>
<td>2 5.1</td>
<td>5 12.8</td>
<td>7 17.9</td>
</tr>
<tr>
<td>Keep in tough as team members</td>
<td>0 0</td>
<td>0 0</td>
<td>2 5.1</td>
<td>7 17.9</td>
<td>5 12.8</td>
</tr>
</tbody>
</table>

**Support for new ideas:**

Team members have varying perceptions on concepts related to their attitudes towards change in their team. The expression of these perceptions ranges from 'strongly disagree' to 'strongly agree'. However, Table 4.6 shows a larger distribution of participants stating that they have a neutral attitude towards support for new ideas, in particular the following statement:

80
"The team is always moving towards the development of new answers"

Table 4.6 Frequency in number and percentage of statements focused on support for new ideas

<table>
<thead>
<tr>
<th>Statement dealing with attitudes towards change in the team</th>
<th>Strongly Agree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Moving towards innovative solutions</td>
<td>N (% )</td>
<td>N (%)</td>
<td>N (%)</td>
<td>N (%)</td>
<td>N (%)</td>
</tr>
<tr>
<td>Open and responsive to change</td>
<td>1 2.6</td>
<td>3 7.7</td>
<td>12 25.6</td>
<td>4 10.3</td>
<td>0 0</td>
</tr>
<tr>
<td>New ways of viewing problems</td>
<td>2 5.1</td>
<td>2 5.1</td>
<td>6 15.4</td>
<td>7 17.9</td>
<td>1 2.6</td>
</tr>
<tr>
<td>provide and share resources for new ideas</td>
<td>0 0</td>
<td>5 12.8</td>
<td>8 20.5</td>
<td>5 12.8</td>
<td>0 0</td>
</tr>
<tr>
<td>support new ideas and their application</td>
<td>1 2.6</td>
<td>1 2.6</td>
<td>9 23.1</td>
<td>6 15.4</td>
<td>1 2.6</td>
</tr>
</tbody>
</table>

**Team objectives:**

Statistical results in Table 4.7 shows that the team concerns about the understanding of the team’s objectives are in the ‘somewhat’ stage. Also worth nothing that a considerable number of professionals 9 (23.2%) state that they have no idea of what the team objectives are, while another 13 (33.4%) professionals claim that they do understand ‘completely’ the team’s objectives.

Table 4.7 Frequency in number and percentage of statements focused on team objectives

<table>
<thead>
<tr>
<th>Questions about the Team Objectives</th>
<th>Not at all</th>
<th>Somewhat</th>
<th>Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N (%)</td>
<td>N (%)</td>
<td>N (%)</td>
</tr>
<tr>
<td>clear understanding</td>
<td>2 5.1</td>
<td>2 5.1</td>
<td>1 2.6</td>
</tr>
<tr>
<td>level of agreement</td>
<td>1 2.6</td>
<td>1 2.6</td>
<td>2 5.1</td>
</tr>
<tr>
<td>level of the team agreement</td>
<td>1 2.6</td>
<td>0 0</td>
<td>6 15.3</td>
</tr>
<tr>
<td>Commitment</td>
<td>1 2.6</td>
<td>1 2.6</td>
<td>3 7.7</td>
</tr>
</tbody>
</table>

81
**Task Style:**

The team members' response to how they feel the team monitors and appraises the work it does, is mainly perceived as being 'to some extent', in particular, statements q4_1 and q4_5 (see Table 4.8).

<table>
<thead>
<tr>
<th>Questions about the Team Task Style</th>
<th>To a very little extent</th>
<th>To some extent</th>
<th>To a very great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>N (%)</td>
<td>N (%)</td>
<td>N (%)</td>
<td>N (%)</td>
</tr>
<tr>
<td>ideas &amp; help from team colleagues</td>
<td>1 2.6</td>
<td>1 2.6</td>
<td>2 5.1</td>
</tr>
<tr>
<td>Enquire what the team is doing critical appraisal of task style to improve outcome</td>
<td>2 5.1</td>
<td>2 5.1</td>
<td>2 5.1</td>
</tr>
<tr>
<td>building on others' ideas to improve standards</td>
<td>1 2.6</td>
<td>3 7.7</td>
<td>3 7.7</td>
</tr>
<tr>
<td>Overall, results indicate that the diabetes care teams enjoy all the characteristics of team climate, that is, participation, support for new ideas, team objectives and task style. However it is hereby indicative that the degree to which the team objectives are understood by the team is even above average (3.22) as illustrated in Table 4.9.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Table 4.9 Overall mean values of team climate by all health centres**

<table>
<thead>
<tr>
<th>Team Characteristics</th>
<th>Mean (95% CI)</th>
<th>Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Participation</td>
<td>2.53</td>
<td>(2.15, 2.91)</td>
</tr>
<tr>
<td>Support</td>
<td>2.16</td>
<td>(1.80, 2.51)</td>
</tr>
<tr>
<td>Objectives</td>
<td>3.22</td>
<td>(2.52, 2.92)</td>
</tr>
<tr>
<td>Taskstyle</td>
<td>3.03</td>
<td>(2.33, 3.73)</td>
</tr>
</tbody>
</table>

Furthermore, Table 4.10 shows no significant difference in the level of team climate between teams A, B and C when compared to each other, using Kruskal Wallis Test.
Correlation analysis was also carried out between team building domains and team climate using Spearman Correlation Test. Only norming (p=0.002) and performing (p=0.03) were significantly positively correlated with team climate.

Non team members

As already mentioned earlier in this chapter, 19 (48.7%) multi-professionals do not consider themselves as working in a team. Non team members had to give their reasons in question 33a why they feel they do not work in a team. Various interesting reasons were highlighted on this aspect.

4.2.2.4 Why no teamwork?

The questionnaire identified 3 non team members, a nurse and 2 chiropodists, who argued that there is no feedback and that contact with other relevant professionals in the care of diabetes severely lacks. This also reflects the limited participation in making important work decisions.
"There is no feedback or else they do not know what a chiropodist work involves. The real work of a chiropodist is not just nails and corns".

(Chiropodist)

"...no feedback from other staff, example the doctor, etc., after referring patients to them".

(Chiropodist)

This is strongly supported by the nurse's comment who also feels that she works as an individual in the care of diabetic patients. In her reason, she claims that she is not involved in the decisions that occur within the team, neither intraprofessionally, nor interprofessionally

"you never make contact with the other nurses who run the same clinics or any of the diabetic staff involved in the diabetes care. Sometimes you do feel you need to discuss with the other professionals, not just with the doctor, for the sake of the patient's good health".

(Nurse)

Three doctors have expressed one common reason why they feel they do not form part of a team.
“Referral system does not work in the primary health sector. For professional reasons, teamwork is not very much encouraged especially in the medical practice”

(doctor)

“.....no structure that allows teamwork to take place”, and

(doctor)

“The organization does not foster the culture for teamwork”.

(doctor)

Discontinuity in the care of the diabetic patient has also been felt as a concern by a doctor, a chiropodist and a nurse.

“It is very important for the patient to be viewed on regular basis by the same multidisciplinary members, especially the doctor, the nurse, the chiropodist and the ophthalmologist, because we form part of the basic staff within the health centre. I also think that it shouldn’t be a problem even for the same endocrinologist and dietician to see the same patients. Maybe an agreement on who sees who should be established. After all continuity of care is the patient’s right”.

(chiropodist)
“....because there isn’t always the same doctor, so there is no continuity”.

(doctor)

“The doctor changes every day. How can he really understand in an effective manner the real needs of the patient?”

(nurse)

In addition, one endocrinologist and one nurse remarked about some important aspects that encourage effective teamwork and enhance the quality of care to the patient. In their statement they highlighted support, coordination and infrastructure.

“There is no administrative support to encourage a culture of teamwork. Moreover, one does not find the appropriate infrastructures, such as IT networking, which for me is a fundamental requisite if we are to implement a coordinated patient-approach care. In my opinion this is good practice which is of benefit to both the patient and the provider’s safety”.

(endocrinologist)

“.....no coordinated approach to diabetic patient’s care and no delegated leaders either”.

(nurse)
With regard to time factor, one doctor and one nurse stressed that time is a very limited factor. They feel they cannot exercise their full competencies and responsibilities if the philosophy of the organization embraces quantity more than quality as reflected in the following statement.

"Normally the doctor does not have much time to dedicate for the client. Basically, he/she only have time to review the treatment of the patient during the diabetes clinic. The doctor has to attend to other tasks, such as, see other patients in the GP clinic and attend to 'Bereg'".  

(nurse)

"......we are restricted on time. It is ideal to have enough time to interact with the patient and get to know him better in order to become more sensitive to his problems and develop good relationship with the patient. To deliver effective care, the doctor needs to know and understand the patient and the patient needs to develop trust in his clinician. It is important to understand this issue and try to allocate some kind of 'protected' time for the patient and to meet the other care providers".  

(doctor)

"....presently due to shortage of doctors it is more seen as an added burden or extra task which we can do without".

(doctor)
The participants were then asked if working in a team would improve the quality of care to diabetic patients (question 33b). Only one participant disagreed to this statement.

The multidisciplinary professions were then asked to forward their suggestions on how to bring about teamwork in the diabetes clinic in the primary health care. There was a very positive response to this question.

4.2.2.5 Suggestion to help team building

The aim of question 33c was to gather suggestions regarding teamwork. Again, many participants enthusiastically gave very interesting suggestions. Various views were expressed by all the disciplines in relation to a practical and effective team formation as can be seen from the following suggestions.

"The involved personnel should come together, identify and acknowledge each other and form themselves into a team. Preferably the primary diabetic team should consist of the doctor, the nurse and the chiropodist because in my opinion they are the ones mostly involved in the care of the diabetic patient".

(chiropodist)
Also,

"First, the team has to form itself and then the team members will meet to discuss what is best for the team and set the team objectives".

(2 nurses)

Another doctor and a nurse added in their suggestions that:

".......the Primary Health Care needs to change its philosophy and foster a new culture of treatment/care for its clients. Teamwork is the ideal. The team members should have clear roles, and objectives should be clarified and quantified. Team members, especially doctors have to be allocated in the diabetes clinic according to a planned schedule and not ‘who will be available’ attitude”.

(doctor & nurse)

Communication was another issue which raised concerns amongst all participants in general. It emerged that communication is one of the commonest elements of a successful team, in order to be able to discuss the health and social needs of the patient and other relevant work issues. The most common suggestions were:

"Adequate communication amongst team members".
“Enough time for a team to get together”

“Interprofessional meetings should be regular and ongoing focusing on patient-centred care”.

Ongoing training and continuing professional development were strongly recommended across all disciplines.

“The Primary Health Care Department should provide opportunities for clinicians to learn in appropriate multidisciplinary environments and in multidisciplinary groups”.

“If post graduate nurses are encouraged to undergo specialization in diabetes care, I believe that the quality of care is much improved. I see this training as an incentive which not only motivates the nurses but is of great benefit to the patient too”.

Administrative and management support, leadership delegation, appropriate systems and infrastructures are other areas highlighted in the suggestions made (Appendix 4).
4.3 Patients’ level of satisfaction with the diabetes care

4.3.1 Demographic Data

The overall response by patients to the questionnaire was very satisfactory. Out of a sample of 90 (100%) patients, 71 (81.11%) patients filled in the questionnaire and returned it to the researcher.

4.3.1.1 Gender

By gender, 35 (35%) are males and 34 (47.9%) are females. Two patients failed to identify their gender.

4.3.1.2 Status and Support

Other sociodemographic data of the patients demonstrates that the majority of them, 50 (70.4%) patients were married, 11 (15.5%) were separated or divorced, and 5 (7.0%) were single. The patients were asked if they have someone, not their partner, husband or wife, who lives with them and gives them support. Out of 63 patients who responded to the question, 31 (43.7%) said “yes” and 32 (45.1%) answered “no” (Figure 4.6)
4.3.1.3 Age

Age distribution by health centre can be seen in Figure 4.7. It is evident that less participation came from the age groups of 40 to 60, and 76+ of both sexes. Overall, the response rate from Health Centre A catchment area was 28 (93.33%) patients, from Health Centre B 20 (83.33%) patients, and from Health Centre C, 25 (66.67%) patients.
4.3.1.4 Education

The patients were also asked to give information with regards to their level of education. For this question 65 (91.5%) patients gave their feedback. There were 40 (56.3%) who stated that they have received primary education, 24 (33.8%) received secondary education, and only 1 (1.4%) patient received tertiary education. The majority of the patients who participated, 42 (59.2%), were over 61 years of age and hence are pensioners. Out of 31 females, 20 stated that they are house-wives, while 4 (5.6%) patients, pertaining to the younger age band, are employed. Two of these work as security guards, one works as a chef and one as a domestic cleaner.

4.3.2 Patients’ response to the care delivered by the multidisciplinary team

4.3.2.1 Care delivered by the doctor

Question 6a; b and c contained statements which deal with the extent to which the patient feels satisfied with the care provided by the doctor/s.

Question 6a which states “The doctor/s take/s my problems seriously”, was answered by 67 (94.4%) patients. Question 6b which states “The doctor/s is/are concerned about my condition and problems while treating me”, was answered by 65 (91.5%) patients. The same number of patients, that is 65 (91.5%), responded to question 6c which stated “The doctor’s explain/s the results of tests and treatment clearly. Satisfaction was the highest score obtained in this area, “agree”. Table 4.11 demonstrates this result.
Table 4.11 Response of patients satisfaction towards care delivered by the doctor

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take/s my problems seriously</td>
<td>1</td>
<td>1</td>
<td>5</td>
<td>38</td>
<td>22</td>
</tr>
<tr>
<td>Concerned about my condition/problems</td>
<td>4</td>
<td>38</td>
<td>23</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Explain/s results clearly</td>
<td>5</td>
<td>31</td>
<td>29</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

4.3.2.2 Care delivered by the nurse

Question 7a;b and c focus on the level of satisfaction that the patient experiences with the care delivered by the nurse/s. This section highlights the degree to which the nurse/s seriously consider patients’ problems, pay attention to patients’ needs, and assess his/her professionalism while treating the patients. The response towards each of the questions in this area was of 67 (94.4%) patients. Again the highest scores focused on “agree” and “strongly agree” which means that the patients are satisfied and very satisfied as Table 4.12 illustrates

Table 4.12 Response of patients satisfaction towards care delivered by the nurse

<table>
<thead>
<tr>
<th></th>
<th>Strongly Agree</th>
<th>Disagree</th>
<th>Neither agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take/s my problems seriously</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paid attention to my needs</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Was professional while treating me</td>
<td>1</td>
<td>31</td>
<td>35</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Same set of statements similar to those assessing the nursing profession were structured in question 8, 9 and 10. The purpose was to investigate the same services for different professions.

4.3.2.3 Care delivered by the Chiropodist

Sixty patients (84.5%) responded to show their opinion about the level of satisfaction towards the care services delivered by the chiropodists. This time, the patients scored less for “strongly agree” and “agree” and more patients said that they “neither agree nor disagree” meaning that the patients are indecisive about the satisfaction level obtained from the care service provided by the chiropodists. (Table 4.13).

Table 4.13 Response of patients satisfaction towards care delivered by the chiropodist

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Take/s my problems seriously</em></td>
<td>1</td>
<td>11</td>
<td>27</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td><em>Paid attention to my needs</em></td>
<td>1</td>
<td>11</td>
<td>28</td>
<td>20</td>
<td></td>
</tr>
<tr>
<td><em>Was professional while treating me</em></td>
<td>1</td>
<td>11</td>
<td>29</td>
<td>19</td>
<td></td>
</tr>
</tbody>
</table>

Questions 9a;b;c and 10a;b;c assessed the satisfaction of the patients with the quality of care delivered by the dietician and the endocrinologists respectively. The results obtained in both instances can be seen in Tables 4.14 and 4.15.
4.3.2.4 Care delivered by the dietician

Less patients, 53 (74.6%) opted to give their view on the level of perceived satisfaction regarding the quality of care delivered by the dietician. Once again the patients reflected their satisfaction in this service by their high scores as can be observed in Table 4.14.

<table>
<thead>
<tr>
<th>Table 4.14</th>
<th>Response of patients satisfaction towards care delivered by the dietician</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Neither disagree</td>
</tr>
<tr>
<td>takels my problems seriously</td>
<td>0</td>
</tr>
<tr>
<td>paid attention to my needs</td>
<td>0</td>
</tr>
<tr>
<td>was professional while treating me</td>
<td>0</td>
</tr>
</tbody>
</table>

4.3.2.5 Care delivered by the endocrinologist

Same trends of satisfaction rates appear in the analysis of data gathered from the patients, regarding the quality of care received from the endocrinologists. Fifty seven patients (70.3%) responded to tell us that most of them are satisfied and a few less 27 (37.8) patients are very satisfied (See Table 4.15).

<table>
<thead>
<tr>
<th>Table 4.15</th>
<th>Response of patients satisfaction towards care delivered by the endocrinologist</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Neither disagree</td>
</tr>
<tr>
<td>takels my problems seriously</td>
<td>0</td>
</tr>
<tr>
<td>concerned about my condition/problems</td>
<td>0</td>
</tr>
<tr>
<td>explain/s results clearly</td>
<td>0</td>
</tr>
</tbody>
</table>
4.3.2.6 Care delivered by the ophthalmologist

It is worth noting that the response of patients towards the level of satisfaction for the ophthalmic service is the lowest. Only 51 (71.8%) patients responded. The level of response by patients towards satisfaction with the other care services in general was higher. In spite of this patients still perceive ophthalmic service as being satisfactory "agree" and very satisfactory "strongly agree". (See Table 4.16).

Table 4.16 Response of patients satisfaction towards care delivered by the Ophthalmologist

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Take/s my problems seriously</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>28</td>
<td>23</td>
</tr>
<tr>
<td>Concerned about my condition/problems</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>27</td>
<td>21</td>
</tr>
<tr>
<td>Explain/s results clearly</td>
<td>0</td>
<td>1</td>
<td>4</td>
<td>29</td>
<td>18</td>
</tr>
</tbody>
</table>

4.3.2.7 Satisfaction with the waiting times

The aspects of waiting times that were investigated in this study were delays and time duration experienced in the waiting room, and satisfactory follow-up appointment. Table 4.17 shows that although the majority, 26 (36.67) patients were satisfied, and 17 (37.5) patients were very satisfied with both aspects of service, there were others that their satisfaction on these aspects was to a lesser extent. The total response to this section was by 60 (84.5%) patients.
Table 4.17 Level of patients’ satisfaction with the waiting times

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informed about delays</td>
<td>3</td>
<td>10</td>
<td>7</td>
<td>24</td>
<td>16</td>
</tr>
<tr>
<td>did not wait long to be seen by the doctor</td>
<td>2</td>
<td>13</td>
<td>6</td>
<td>26</td>
<td>14</td>
</tr>
<tr>
<td>Satisfied with the follow-up appointment</td>
<td>0</td>
<td>4</td>
<td>4</td>
<td>28</td>
<td>22</td>
</tr>
</tbody>
</table>

4.3.2.8 Satisfaction with the diabetes clinic

Out of 71 patients who decided to participate in this study, only 58 (81.2%) gave feedback reflecting on how contented they were with the overall service. Table 4.18 illustrates that the patients were pleased with the service and will recommend the diabetes clinic to others.

Table 4.18 Level of patients’ satisfaction with the overall service

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither agree nor Disagree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly recommend the diabetes clinic to others</td>
<td>0</td>
<td>1</td>
<td>3</td>
<td>30</td>
<td>26</td>
</tr>
<tr>
<td>The diabetes care I receive is worth attending</td>
<td>0</td>
<td>0</td>
<td>1</td>
<td>27</td>
<td>29</td>
</tr>
</tbody>
</table>

Comparative analysis using Kruskal Wallis Test, indicates that the service that doctors give to diabetic patients significantly varies (p=0.045) from health centre to another. One may also note that the ‘overall service’ is also significantly different (p=0.047) This is illustrated in Table 4.19.
Table 4.19 Comparison of patients satisfaction by health centre with the care delivered by each individual team member

<table>
<thead>
<tr>
<th>Satisfaction with the care delivered by the:</th>
<th>Health Centre</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
<td>B</td>
<td>C</td>
<td>Overall</td>
<td>p value</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Mean</td>
<td>Mean</td>
<td>Mean</td>
<td>Mean</td>
<td>Mean</td>
<td>Mean</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doctor</td>
<td>3.31</td>
<td>3.53</td>
<td>3.07</td>
<td>3.28</td>
<td>0.045</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nurse</td>
<td>3.5</td>
<td>3.53</td>
<td>3.33</td>
<td>3.45</td>
<td>0.229</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chiropodist</td>
<td>3.2</td>
<td>3.25</td>
<td>2.91</td>
<td>3.1</td>
<td>0.167</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dietician</td>
<td>3.12</td>
<td>3.47</td>
<td>2.91</td>
<td>3.13</td>
<td>0.096</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Endocrinologist</td>
<td>3.22</td>
<td>3.42</td>
<td>3.04</td>
<td>3.2</td>
<td>0.237</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ophthalmologist</td>
<td>3.37</td>
<td>3.45</td>
<td>3.05</td>
<td>3.27</td>
<td>0.077</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Waiting times</td>
<td>2.81</td>
<td>3.11</td>
<td>2.59</td>
<td>2.8</td>
<td>0.216</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Overall service</td>
<td>3.46</td>
<td>3.57</td>
<td>3.18</td>
<td>3.38</td>
<td>0.047</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Figure 4.8 shows that there is no association between team climate and patient satisfaction in the three health centres.

Figure 4.8 Association between team climate and patient satisfaction

<table>
<thead>
<tr>
<th>Health Centre</th>
<th>Team Climate</th>
<th>Patient Satisf.</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>12.13</td>
<td>3.46</td>
</tr>
<tr>
<td>B</td>
<td>9.13</td>
<td>3.57</td>
</tr>
<tr>
<td>C</td>
<td>10.86</td>
<td>3.18</td>
</tr>
</tbody>
</table>
Since team climate and patient satisfaction scores hail from different datasets (one based on the staff survey and the other on the patient survey, respectively), it would not be possible to test whether team climate and patient satisfaction are correlated. However, there seems to be no visible trend amongst health centre to support such a theory.

4.4 Other Comments

The last part of the questionnaire invited the patients to give their suggestions, complaints, complements and other general comments. Feedback was received from fourteen patients. Some of the feedback was positive and encouraging, such as:

"Well done!", "I am very satisfied with the service" and "This is a very good service"

Others were challenging and worth considering to implement change and make the service more cost effective and sensitive to the patient’s needs, such as for example:

".........I wish that appointment time is not at 7.00 a.m. for everybody...."

and

"It would be much better if after you are seen by the nurse, you’re seen by the doctor immediately, and not having to wait for a very long time until you’re seen by the doctor .......”

The ‘comments’ section will be discussed in more depth in the discussion chapter
4.5 Conclusion

The aim of this chapter was to interpret and relate the results obtained in this study with current theories in teamwork as available from the literature. The next chapter will use the contents of the discussion in order to fulfill the aims and objectives highlighted in earlier chapters. Strengths and weaknesses of the study together with implications to healthcare management will be highlighted.
5. DISCUSSION

5.1 Introduction

In this chapter, the data is interpreted in relation to the hypotheses and the research questions of the study, and based on information published in the literature. The discussion will discuss the effectiveness of the diabetes team based on team building, team climate and patients’ satisfaction. This perspective should be a valuable tool for management in order to recognize the need for change so as to improve the care of Diabetes in the Maltese Primary Health Care Department. Literature related to teamwork in health care is quite extensive where specific reference to teamwork in diabetes care is also made.

In this chapter, discussion will be based on the research questions and hypotheses 1, 2 and 3 as stated in the ‘Literature Review’ chapter.

5.2 General comments on Professional Respondents

Demographic and qualifications data gathered from questions 1 to 4, in chapter 4, are analysed in Figures 4.1 to 4.3, in order to give an overview of the professional team sample, who participated in the study. Information is categorised by profession, health centre, age and qualifications. The aim is to examine if these domains have any effects on the perceptions of the participants. In fact, results show that there are no differences in
trends between those professionals who perceive themselves as working in a team and those who do not, irrespective of their age, profession, qualifications and health centre (Figures 4.4 and 4.5).

Each question/statement of the questionnaire is analysed independently to obtain a clear understanding of how the professionals perceive teamwork.

5.3 The extent to which teamwork is prevalent in the management of diabetic patients in primary health care in Malta

The results in chapter 4, section 4.2.2.1 show that slightly below half of the diabetes professional providers (n=18; 46.2%) perceive themselves as working in a team. Even though the two groups are fairly limited in size, due solely to unavailability of more professionals in this area, the resultant issues coming from the two groups tally substantially and this is considered to be a further confirmation of the reality of these issues. As explained in the following section, similar findings have been identified in the literature in bigger samples. The fact that the professionals are split almost equally between team members and non-team members raises concern as to whether it is fully understood by all professionals what the terms team and teamwork mean. Similarly, Pearson and Van Zwanenberg (1991) also found misunderstandings and mismatches of perceptions of teamwork among professional providers.

5.3.1 Team members

However, the majority of participants who perceive themselves as team members (n=15;
38.5%) agree that they work in collaboration with each other, identify the objectives of the team together, and is fundamentally important to work closely together in order to achieve those objectives, as can be seen in Table 4.1. Teams are particularly good at combining talents and providing innovative solutions to possible unfamiliar problems. Such an attitude is described by Headrick et al (1998) as an important factor to enhance the quality of care and decision making.

However, these respondents strongly agree that their team does not meet to discuss the effectiveness of its achievements and to identify better alternatives of how to reach their goals more effectively. Brockmann (1996) stresses that one of the key functions of the team is to inform its members about what is happening and what is affecting the team’s activities and outcomes. This issue was also highlighted by several professionals as one reason why they perceive themselves as non team members.

Further analyses of the team members to establish the level of team building and team climate was carried out. This will be discussed later on in this chapter.

5.3.2 Non team members

Bond et al (1985) expressed that despite clear benefits in teamwork, emerging from research studies, there may be substantial barriers to cooperation and collaboration of teamwork with the consequence that professionals may dissociate themselves from the team. As already stated, most of the diabetes care providers perceive themselves as not working in a team (19; 48.7%) (refer to section 4.2.2.1). From content analysis various reasons were identified to support their arguments.
Some professionals, from across all disciplines, perceive that they work individually in the care of diabetic patients. This emerged very clearly in their remarks. One nurse in particular highlighted that she never makes contact with the other diabetes nurses or any of the diabetic multidisciplinary team, who are involved in the patient's care. Additionally, other aspects which are considered to be crucial requisites to team working are also earmarked in the results, section 4.2.2, in particular:

5.3.2.1 Communication

A) Feedback

Content analysis clearly indicates that feedback on the diabetic patients after referral for consultation is lacking. Such attitude frustrates professionals and threatens the safety of the patient. In accordance, Scott and Mitchell (1979) emphasise that the mechanism of communication enables health care providers to interact and give feedback on patient's health. Peer reviewing and feedback within a team helps to improve effectiveness in both evaluative and developmental perspective (Dominick, Reilly & McGourty, 1997). The authors also state that teams which exchange feedback, experience improvement at both leadership and subordinate level reveals the gap which exists between the goals and the actual feedback. This gap subsequently promotes a change for improvement.

Feedback has been shown to enhance team effectiveness (Ingram et al 1997) as it contributes to reduction of work related stress caused by demanding jobs, and therefore boosts moral support (Garner, 1994). In addition it fosters a shared mental-model, that is, the development of shared expectation and establishment of role clarity within the team
Content and timelessness of feedback is enhanced by performance monitoring (Sallas et al., 2004). Feedback on performance is most feasible in teams which have repetitive and countable outputs and short cycles (Sandstorm, De Meuse & Furtell, 1990). Feedback and reviews also enhance improvement in secondary behaviour and thus achieving goals more effectively. An example of this is acting on anticipated problems rather than solving them as when they turn up (Dominick et al., 1997) as in the case of diabetes care.

B) Interaction

Furthermore, Hellriegel (1999) stresses that interaction is the foundation stone of good practices. In spite of this, in this study, participants state that communication between professionals is inadequate. Apart from being distressing to the professionals, inadequate communication is also unrewarding. This may result in burnout and psychological morbidity (Jenkins, Fellow field & Poole, 2001). There is also an increased risk of errors leading to raised patient morbidity and mortality (Schull, Ferris, Tu, Hux & Redelmeier, 2001).

Traditional working models in healthcare have also shown to influence the level of communication. Health care teams practising traditional physician-leader model and where patients fall under the physician’s sole responsibility are characterised by limited member interactive communication. Here team members communicate through written notes and usually interactions are requested by the nursing staff (Garner, 1994). Such hierarchical teams inhibit the flow of potential relevant information up the chain of
command (Thomas, Sexton & Helmreich, 2003). Additionally, the feeling of being isolated from the team and not seeing oneself as having specific roles in the team may also inhibit the communication of important information (Schull et al., 2001).

Notwithstanding the evidence available in the literature promoting good communication, many studies still report inadequacies in team interaction in healthcare. In this study various comments were made, in particular, by two chiropodists and a nurse, regarding inadequate communication between professionals.

Furthermore, three doctors claim that they do not work in a team for various reasons. One doctor states that a ‘referral system’ does not work in the primary health care sector because of professional reasons. A possible explanation to this may be lack of trust and openness between the professionals, as Hickman et al (2003) state. Furthermore, the authors emphasise that this behaviour blocks the critical communication and leads to loss of coordination in the individual efforts. The other two doctors claim that the department lacks team culture and structural frameworks which are considered to be important factors that support, encourage and enhance teamwork amongst health care professionals.

5.3.2.2 Quality of Care

Mountain, (2005) emphasised that clinicians have to work together in order to provide seamless care for patients with diabetes. Incongruent to this, discontinuity of care has emerged in this study as an issue of great concern. It is evident that the diabetes clinic in this study does not fall under the responsibility of one doctor, for instance, but of any
doctor who happens to be on duty on that particular day. Hence, due to lack of continuity of care, this study indicates that it is difficult for the clinicians and the patients to build a good relationship and work together in partnership. According to Szasz and Hollender (1976) continuity of care is the patient’s right to safeguard his health. Two recent rigorous trials carried out in UK on teamwork in diabetes care showed that continuity of care as delivered through teamworking was associated with lower drop out rates and was more cost effective for the patient (Greenhalgh, 2001). Moreover, in another study, Wasson et al (1984) found that diabetic patients receiving continuity of care had fewer emergency admissions and shorter hospital lengths of stay than those who did not, and viewed their providers as more knowledgeable, thorough and interested in patient education. Congruent to this, statistics from diabetes clinics in the Primary Health Care also show 20% failure of diabetic patients attending the clinics during these last five years. Discontinuity of care can therefore be one possible factor for this result.

5.3.2.3 Administration / Management

Additionally, reference was made to administrative/management support which seems to be also lacking in diabetes care. According to Borrill et al (2000) every knowledgeable manager knows that the most valuable asset in the organisation is personnel through which results are to be achieved. For performance improvement, there should be better understanding and official recognition of the team, as well as full support by the management. Concomitantly, Lanberts and Riphagen (1975) sustain that in real life, teamwork success rarely happens by itself without focused team building efforts and activities from the management side. There is simply too much space for problems. For
example, different personalities, instead of complementing and balancing each other, may build up conflicts. Or even worse, some professionals with similar personalities may start fighting for authority and dominance in certain areas of expertise. Even if the team goals are clear and accepted by everyone, there may be no team commitment to the group goals or no consensus on the means of achieving those goals. Individuals in the team may just follow their personal opinions and move in conflicting directions.

5.3.2.4 Coordination

It was further established by non teamworking professionals that coordination and leadership in the care plan of diabetic patients is also inadequate. Diabetic patients require to be referred to specialty care, such as for example, to a nephrologist, hence the clinician must coordinate service delivery across settings, multiple providers, and time, to maintain continuity of care. Breakdowns in coordination of primary and specialty care have the potential for missed or delayed diagnoses and treatment, repeated or unnecessary testing, adverse drug reaction, and a host of other problems (Hennen, 1975). In a recent study supported by the Agency of Healthcare Research and Quality researchers, found that referring clinicians often fail to coordinate and communicate effectively relevant patient information to specialists when making referrals. This result supports the need for clinicians who receive primary care training to be educated on ways that patients can be successfully co-managed (Tessler & Gubman, 1986).

5.3.2.5 Leadership

Leadership was another issue highlighted in their comments, associating its importance to
effective teamwork. Congruently many researches stress that there is considerable research evidence that leaders affect team performance and evidence of the relationship between leadership style and team effectiveness (Brewer, Wilson & Beck, 1994; Komaki, Desselies & Browman, 1989). Eden (1990) examined the effects of platoon leaders’ expectations on team performance. His work with the Israeli Defence Forces showed that those platoons which trained under leaders with high expectations, performed better on physical and cognitive tests. Podsakoff and Todor (1985) investigated the relationship between team members’ perceptions of leader reward and punishment behaviours and team cohesiveness, drive and productivity. Results showed that both leader contingent reward and punishment were positively related to team drive and productivity. Leader contingent reward was also related to cohesiveness, while leader with no contingent punishment behaviour was negatively related to team drive.

Primary health care team members in England rated their effectiveness more highly when they had strong leadership and high involvement of all team members (Ross, Rink & Fume, 2000). In nursing care teams, Dreachslin, Hunt and Sprainer (2000) concluded that leadership mitigated the influence of race in self-perceived communication effectiveness. Participants’ comments support the concept that team leaders who coordinate and lead the group are an asset to the team. Leaders who encourage discussion about differences enhance perceived team effectiveness (Tessler & Gubman, 1986). Moreover, leaders provide a unifying force through validating the alternative realities and appreciating the different perspectives of team members, thus moderating the potentially negative effects of racial diversity on team processes (Eden, 1990). However, when the team does not have a clear leader but a number of people lead the team, in most cases this is likely to
cause considerable confusion. Hence team performance is poor where there is no clear leadership (Borrill et al., 2000).

5.3.2.6 Suggestions to help build teamwork

Those health care professionals who perceive that they do not work in a team have put forward valuable suggestions which will be considered in the next chapter under recommendations.

5.4 To what extent has teamwork developed in the management of diabetic patients in primary health care

Overall mean values of Tuckman’s team building questionnaire show that the teams in all three health centres are in all four stages of forming, storming, norming and performing but at different levels as can be seen in Table 4.3. A team is believed to be continuously moving through this dynamic process as is the diabetes team understudy. According to Tuckman (1977) this is more so if the team members are not constant, in which case the doctor who attends to the diabetes clinic practically changes with each clinic session. However, on further analyses of teams by each individual health centre, a significant difference was identified in the norming (p=0.042) and performing (p=0.031) stages. It resulted that health centre A is in the highest levels of norming (3.42) and performing (3.83), while health centre B is in the lowest levels of norming (2.55) and performing (2.83) as illustrated in Table 4.4. Tuckman’s model (1965) explains that as the team develops maturity and ability, relationships become more established.
According to Tuckman (1965) at stage one, forming, individual roles and responsibilities are unclear. There is high dependence on leader for guidance direction. Therefore there is little agreement, other than what comes from the leader. Conversely to this, findings in this study have identified deficiency in leadership with the consequence that some professionals are not clearly directed and may find themselves reluctant to contribute their share of responsibilities towards the patient’s care.

In the storming stage, decisions do not come easily within the group. This is the strongest and most viable phase for temper flare-ups and disagreements. Struggles are a daily fact. Consistently, qualitative data in this study has revealed that more often processes like feedback, interaction, support and participation, amongst others, break down. When the team is in the storming stage, team members may be mislead and think that they do not pertain to the team.

In the norming stage, agreement and consensus characterise this important stage of teams. Big decisions are now made by the team. The team may engage in fun and social activities and there is general respect for the leader and some leadership is shared by the team. The team is able to come to common decisions where winning is more likely than compromise. Some of these characteristics have dominantly emerged in this study when testing team members for their level of participation which is one of the four domains of team climate (Table 4.5).
At stage four of the Tuckman’s model, performing, the team has matured and can function both tactically and strategically. Each team member knows what is going on and who is doing what. The team shares vision and can function without assistance from the leader. Disagreements occur occasionally but are resolved within the team positively. Congruently, team members have demonstrated to some extent this team atmosphere which can be observed in Table 4.8.

5.5 To what extent is team building associated with team climate

There are various factors which influence team climate. According to definition by Steven & Campion (1994), team building employees unite around a common goal and generate greater productivity. Team climate develops from how the members perceive the interrelationships among themselves as already discussed in section 5.4. This is further influenced by the organisational climate and affected by social support, proximity, distinctiveness, fairness and similarity.

In this study, the team climate level of the diabetes team was investigated mainly on the following four domains: Participation, Support for new ideas, Team objectives and Task Style and the response rates were observed in order to establish the level of team climate achieved in relation to the level of team building.

5.5.1 Participation

It resulted that overall, team members have developed an attitude of sharing relevant
information and issues in the care of the diabetic patients (refer to Table 4.5). In fact, the team members strongly perceive that they have a common attitude of “we are in it together”, (n=10, 25.6%) by communicating and reporting important matters. They also perceive that they make real attempts to share information (n=10, 25.6%). This is congruent with feelings expressed in other areas of healthcare involving multidisciplinary teamwork as reported by Leipzig et al. (2002). As a result, the belief shared among the team members is that decisions are centralized (Pearson & Jones, 1994).

5.5.2 Support for new ideas

According to Horner (1997) this relates to expectations, approval and practical support of attempts to introduce new and improved ways of doing things. The participants of this study perceive this concept as not so popular within the team, in particular towards finding innovative ways of viewing problems and identifying appropriate solutions. They are also not so keen on supporting innovative ideas as can be illustrated in Table 4.6. This may be due to the organisational culture which is more commonly experienced in organisations that are highly structured (Bacon et al., 1998) or may be the result of belonging to only a loosely defined and weakly interdependent team (Kazenbach & Smith, 1993). On the other hand, team members are more ready to provide and share resources for new ideas, and more open, positive and responsive towards change.

Effective team working is reputed to promote innovation in organisations, including those in the health sector. Many input and process variables have been demonstrated to predict innovation in teams.
In relation to inputs, there is some evidence that heterogeneity of team composition is related to team innovation (Hoffman & Mater, 1961; Mc Grathe, 1984; Jackson, 1996) such as in the case of the diabetes team which is made up of multi professional carers. West and Anderson (1996) carried out a longitudinal study of the functioning of top management teams in 27 hospitals and examined relationships between team and organisational factors and team innovation. Their results suggested that team processes best predicted the overall level of team innovation, while the proportion of innovative team members predicted the rated radicalness of innovation introduced. Specifically, West and Wallace (1991) found that team collaboration, commitment to the team and tolerance of diversity were positively related to team innovativeness. Such team processes are communication, goal sharing, decision making and problem solving.

5.5.3 Team objectives/goals

Results in Table 4.7 show that the team members have low perceptions of the general agreement/decision making of the team, and they do not understand very clearly the objectives of the team. Furthermore, they also claim that they do not fully commit themselves to perform towards achieving the common objectives of the team.

Goals give the team direction and provide a feeling of value and importance. It is very important for a leader to make sure the team knows how the work will be done and how they will accomplish their tasks. Without goals, the team has nothing to strive for, and many members may lose motivation. Keeping the goal simple and achievable will be very beneficial to the team in the end.
There exist various reasons why the diabetes team members do not fully commit themselves to the team objectives/goals. For example, Weldon and Weingarten (1993) describe the importance of planning in teams for achieving team goals, and suggest that team members are characteristically slow to respond to changes in their tasks or their environments that make their strategies ineffective or their goals obsolete. They propose five ways of supporting team work. Goals should be set for all dimensions of performance that contribute to the overall effectiveness of the team; feedback should be provided on the team’s progress towards its goal; the physical environment of the team should remove barriers to effective interaction; team members should be encouraged to plan carefully how their contributions can be identified and co-ordinated to achieve the team goal; and team members should be helped to manage failure, which can damage the subsequent effectiveness of the team.

5.5.4 Task style

Again, this study demonstrates that the diabetes team members perceive that the team monitors and appraises the work it does, only to some extent. This can be seen in Table 4.8. Jarvenpaa and Shaw (1998) state that regardless of how committed and well-meaning professionals are initially, inadequate support by the team towards shared tasks and role ambiguity tend to diminish their commitment, increase absenteeism, and other negative behaviours, all of which translate into lower performance.

Additionally, Jansson, Isacsson and Lind Holm (1992) stress the importance of teams to have the appropriate mix of clearly defined team roles. Essential teamwork activities
have to be conducted and integrated to produce products and services. Hence, dialogues about issues that have to be repeatedly resolved must be identified in order to provide shared interaction and enable people to complete their tasks. Task interdependence within the diabetes team is an important requisite. This varies depending on where and to what extent individuals and teams have to rely on each other to complete their tasks (Dickinson & McIntyre 1997).

Furthermore, an overall analysis of the team climate domains by health centre was carried out. Although results show a difference in the mean values (Table 4.9), statistical significant difference could not be proved as illustrated in Table 4.10.

However, correlation analysis between team building and team climate domains identified association between overall team climate and norming ($p=0.002$) and overall team climate and performing ($p=0.03$). Team building is therefore associated with team climate. This complies with the statement made by Hackman (1987) that transition from groups to teams occurs as the members integrate, interact and influence each other. They develop a number of dynamic processes that eventually create team climate. Thus, the developed team of professionals separates itself from a random collection of individuals. Both the professional carer and the patient benefit from this situation.
5.6 To what extent is team climate associated with patient satisfaction

To understand better the perception of the patients towards service satisfaction, an overview of their sociodemographic status is given.

5.6.1 General comments on patients respondents

The majority of the patients who participated in this study came from the age group of 61 to 75 years, whereby most of them are housewives or pensioners. Overall, the patients are married and 32 of them have no one at home to support them in their needs as illustrated in Figure 4.6 and 4.7. Moreover, the education they have received is up to primary level, except for 24 patients who have secondary education and one has tertiary education.

5.6.2 Association between team climate and patients satisfaction

Statistical results as demonstrated in Figure 4.8 show that there is no association between overall team climate and overall patient satisfaction per health centre. Results show that Health centre A, which enjoys the highest level of team climate, shows no association with the highest level of patient satisfaction which in this case is evident to be more dominant in Health Centre B. Furthermore, as already mentioned in the results chapter, team climate and patient satisfaction scores, hail from different datasets and hence testing for association between the two concepts is not possible. Additionally, comparison to establish association between team climate and patients satisfaction cannot be achieved because the professional sample size under investigation is severely limited. In the literature, direct association between team climate and patient satisfaction still
needs to be researched further (Conti & Kleiner, 1997).

However, in a study carried out in two health authorities, from each of the three selected English NHS regions, North Thames, North West and South West, found that team climate was associated with quality of care for diabetes care, access to care, continuity of care, and overall satisfaction for both the patients and the providers. This was identified when investigating management of chronic diseases in practices with longer booking intervals. In this study, 60 general practices participated and the findings showed that scores achieved were higher in those practices where staff reported better team climate (Campbell et al., 2001).

Furthermore, mean scores of team climate in Australian general practices and in the UK concluded that team climate predicted the job satisfaction of the professionals, irrespective of the number of practice staff in the team, highlighting in particular, that better team climate is associated with greater patients' satisfaction (Krueger et al., 2002; Rhoades & Eisenberger, 2002; Tzeng, Ketefian, & Redman, 2002). Additionally, Sheppard (1993) found that there was a cause-and effect relationship between employee satisfaction and clients' satisfaction. He states that it is impossible to maintain a loyal customer base without a base of loyal employees, and that the best employees prefer to work for organisations that deliver the kind of superior value that builds customer loyalty. In conclusion it is evident that team climate is important for both patient and staff satisfaction.
However, formal investigation of this issue would be needed to verify the applicability of these findings in the local scenario.

5.7 What are the views of the diabetic patients with regard to diabetic care service provided in primary health care in Malta

Overall, the outcome of this patient satisfaction study is positive, where patients are satisfied to different degrees with the service provided by all the professionals in the team, scoring highest for doctors and nurses (refer to Tables 4.11 to 4.16). However, it is worth noting that there is a significant difference in the patients’ satisfaction with the service delivered by the doctor (p=0.045) and their satisfaction with the overall service (p=0.047) (Table 4.19). This may account to the fact that most patients associate the care/treatment they receive with the doctor. Congruently, an Australian study found that care, professional attitudes and behaviours were significantly correlated with patient satisfaction, in particular, the doctor who acts as personal confidante to the patient. Furthermore, factors related to multi-professional skills were found to be also strongly associated with patient satisfaction (Lewis, 1994). This is supported in nearly all studies providing evidence that improving patient satisfaction requires a change in attitude on the part of professional staff (Avis et al., 1995; Draper & Hill, 1997; Gilbert et al., 1992; Healy et al., 1995; Lewis, 1994; Smith & Sanderson, 1992).

Results of patients’ satisfaction regarding waiting times, show that the majority of patients, 26 patients, agree that they were informed about any delays, did not have to wait
long to be seen by the doctor and that they were pleased with the given follow-up appointment. Conversely, a considerable number of patients complained about this service (Table 4.17). This was also specifically highlighted in content analysis of gathered remarks from the patients. Clinic waiting time and difficulty in getting an appointment were factors perceived as preventing diabetic patient’s regular clinic attendance (McDonald et al., 1999), while dissatisfaction about both the amount of information offered and the way it is presented is a second frequently reported correlate of patient satisfaction (Draper & Hill, 1997; Bishop et al., 1991; Gilbert et al., 1992; Kenny, 1994; Lewis, 1994).

5.7 Conclusion

The aim of this study was to interpret and relate the results obtained in this study with current theories in teamwork as available from the literature. The next chapter will use the contents of the discussion to summarize the aims and objectives. Strengths and weaknesses of the study together with implications to healthcare management will be highlighted.
6. CONCLUSION and RECOMMENDATIONS

6.1 Introduction
This chapter outlines the conclusions of the study and proposes recommendations to management, practice and further research. It also discusses the strengths and limitations of the study.

6.2 Conclusions
This study shows that only approximately half of the professionals perceive themselves as part of a diabetes team. However, this group of participants enjoys various processes congruent with effective teamwork as described in the literature. On the other hand, especially with non team members, the professionals claim that there is lack of basic team processes important for the cohesion of the team, such as communication, training, goal sharing, continuity of work, support, multidisciplinary meetings and leadership, which weaken the effectiveness necessary for the diabetes team to reach the expected optimal performance.

6.2.1 Objective 1: To investigate the extent to which teamwork is prevalent in the management of diabetic patients in primary health care in Malta

Those professionals, who perceive that they work in a team show positive attitudes
towards teamwork. On the other hand, those professionals, who claim themselves as being non team members, perceive that positive attitudes of both the diabetes multiprofessional providers and the organisation would further unite the professionals into a team, enhance the level of team effectiveness and the quality of care if accompanied by appropriate skills, behaviour, leadership, management, structural processes and culture.

6.2.2 Objective 2: To investigate the extent to which teamwork has developed in the management of diabetic patients in primary health care in Malta.

It has been established that the general diabetes team in the three health centres, functions within the four stages of forming, storming, norming and performing, which according to the literature is the status in which a team usually operates. Team members are at different stages at all times and the tactful leader has to guide and direct the whole team forward by effective communication and motivation. Distinctively, the individual health centre teams have shown statistically ongoing differences in the norming and performing stages.

6.2.3 Objective 3: To assess the extent to which team building is associated with team climate.

As a means of identifying the level of team building in the diabetes team, the team climate domains were investigated. The diabetes team has shown positive responses
towards some aspects of team climate domains but not so positive responses towards some other aspects, meaning that there exist areas that need to change or be improved, such as, support for innovative ideas, and general agreement and commitment to the objectives of the team. Centre A showed the highest levels of norming and performing, whilst Centre B showed the lowest levels of norming and performing when all three centres were compared with each other. Furthermore, association between team building and team climate domains was found positively correlated only for norming and performing.

6.2.4 Objective 4: To assess the extent to which team climate is associated with patient satisfaction.

Although no statistical results could be obtained to detect any direct association between team climate and patient satisfaction, the patients have reported different levels of satisfaction with the diabetes service currently being offered from Centres A, B and C separately. However, testing the direct association between team climate and patient satisfaction was not feasible due to different datasets.

6.2.5 Objective 5: To identify the views of the diabetic patients with regard to diabetes care service provided in primary health care in Malta.

From this study one can conclude that there are various aspects with which the patients are satisfied. Their positive attitude was reflected not only in the statistical results drawn
from the study but also in some of the comments they made. The patients claim that overall they are satisfied with the service although they believe that modifying some aspects of the diabetes care services, such as waiting times would improve the levels of their satisfaction.

6.3 Strengths of the Study

The study uses a mixed method approach as research tool. Closed questions are helpful to provide specific information and avoid deviation from focus. They provide probing in order to get further clarification. However, open-ended followed by closed questions sum up the main concepts. In addition, the same semi structured questionnaire was used for all participants so that the different perceptions can be brought out. Moreover, inviting participants to give comments and suggestions, will give them the opportunity to give vent to their inner feelings and opinions, while giving the researcher a deeper understanding of the study.

Both questionnaires were modified and adapted to suit the purpose of this study. They were translated into Maltese in order to enable the participants to respond in the language in which they felt more comfortable.

6.4 Limitations of the Study

As the number of the health care professionals participating in this study was small, it was difficult to obtain realistic parametric results. This was evident when quantitative data was categorised by centre for comparison.
Since the data to analyse patients’ satisfaction was gathered separate from team data, statistical analysis could not be carried out.

Due to the fact that one of the age groups in the stratified randomised sample of the patients was restricted in one particular Health Centre, the number of participants in the other groups was kept comparatively similar for more reliable attributable results.

The author was aware of the literacy bias arising from the use of a questionnaire. However, this was regarded to be less of a problem than bias arising from personal interview since the client may not answer truthfully.

Having the ‘indecisive’ option at the midpoint of the Likert scale may have resulted in its misuse. A better alternative would have been an ‘average’ option, however including ‘indecisive’ as a sixth option in the Likert scale.

6.5 Recommendations

These recommendations are intended to represent the principles for establishing a successful multidisciplinary team for diabetes care. An effective diabetes team must be built on best practice and must meet the following basic principles:

6.5.1 Recommendations for the Diabetes Team

1. Specialisation of post graduate professionals in diabetes care may extend the
compete and role of the diabetes nurse to ease some of the workload of other team professionals, in particular, the doctor who can make better use of his time by seeing to patients' problems and needs. The specialized nurse can act as an educator to the patients and advise on diet and exercise, apart from performing other nursing responsibilities.

2. Management procedures such as staff allocation scheduling, especially in the case of doctors, can improve the efficiency of the diabetes service. Changes in the diabetes clinics within the Maltese Primary Health Care, and with proper management, can ease some of the critical problems such as scarce human resources as well as improve incurred costs.

3. Team members must be trained how to work together in order to be productive and successful. If team members can work together, they will be able to raise and resolve issues that are standing in the way of accomplishing a goal. Working together may not come easy at first, but with proper training the team will be able to adapt quickly. The training may include the instruction on how to communicate better, manage conflict, or understand the skills and talents that everyone brings to the table. A full assessment of the team's need is recommended before the training. If people are working together effectively rather than working by themselves, a lot more work will be accomplished.

4. A more adequate interprofessional and intraprofessional working times to support
continuity of work for the team members is being proposed as well as better time schedules for the patients to avoid excessively long waiting times.

5. In addition the team should be officially recognised by both the members themselves, colleagues and management, and their roles and responsibilities should also be clarified by means of continuous discussion. Establishing appropriate structures and systems within the organization will contribute to achieve this aim.

6. The team should establish the best method of communicating both work related issues and also information related to patient care through briefing and debriefing. It should establish a mechanism by which both internal and external feedback is communicated to the team.

7. Another important ingredient for team building is supportiveness within and outside the team. Supportiveness within the team is the aspiration to help team colleagues succeed. By supportiveness, it is meant dedication to the team's success, wanting what's best for the team, works behind the scenes to aid the team, is willing to pitch in whenever necessary, always willing to help out, willing to take on more responsibility, very easy to work with, and listens well to others' ideas. Team support is a multidimensional concept that includes emotional support, informational support, instrumental support, and appraisal support. Team building will be successful if the team members can cover each of these types of team support.
8. It is strongly recommended that the team organises regular meetings to discuss work related issues, iron out differences between the team members and discuss controversial issues constructively. It should also engage in open discussions between team members to clarify existing ambiguities in roles and responsibilities. Such discussions must aim at attaining consensus to gain full support of the team members.

9. Contribution to excellence by shared effort to achieve quality of task. In order to enhance effectiveness, members have to set appropriate team goals through open communications. All the team members ought to be in agreement and fully committed to the team objectives. The team should monitor and evaluate team performance in order to enhance excellence in quality of care. Audit meetings and peer reviews should be organised in order to evaluate the team’s progress.

10. A team leader is essential to the team to establish direction and to influence and align others toward a common goal, motivate and commit team members to action, and to make them responsible for their performance.

6.5.2 Recommendations for improving patients’ satisfaction with the service.

1. Various methods of appointment scheduling can be utilised to reduce waiting times for the patient. Better planning of appointment schedules may prompt a reinvestigation into standards set in the documents of the ‘Quality Service Charters’ and other policy approaches appropriate to the waiting problems.
2. Whenever possible the same doctor should be assigned to see the same patients in order to provide continuity of care for the patient.

6.5.3 Recommendations for Management

For the Diabetes Team to serve as a model for other multi-disciplinary teams in the Primary Health Care Department, should the above mentioned recommendations be implemented and have the desired effect of enhancing team effectiveness.

6.5.4 Recommendations for Further Research

It is recommended that the study is replicated after the team has implemented the outlined recommendations. This would be useful exercise to evaluate the impact that these recommendations would have on the professionals involved and the diabetic patients who make use of their service.

6.6 Conclusion

This study is the first of its kind which evaluates the effectiveness of teamwork within the diabetes clinics in the Maltese Primary Health Care Department. This study has shown features of teamwork in congruence with that described in the literature. The positive attitude towards teamwork can help the team provide a holistic perspective towards patient care. Furthermore, this leads to improved performance, member satisfaction and team viability.
REFERENCES


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Jenkins, V. A., Fallowfield, L. J., Poole, K. (2001). Are members at multidisciplinary teams in breast cancer aware of each other's informational roles? *Quality in Health Care, 10*, 70-75.


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Appendix 1

Team and Patient Satisfaction Questionnaires (English)
Interdisciplinary Teamwork in Diabetes Care Questionnaire
(To be filled in by health care professionals working in Diabetes Care in the Primary Health Care)

Please write your answer in the space provided or tick with an 'X' the box / boxes that apply.

1. Date: ...................... Age: ............... .

2. Sex:
   (0) Male [ ]   (1) Female [ ]

3a. What is your profession?
   (0) Doctor [ ]
   (1) Nurse [ ]
   (2) Chiropodist [ ]
   (3) Dietician [ ]
   (4) Endocrinologist [ ]
   (5) Ophthalmologist [ ]

3b. Qualified / Graduated during year ............... .

4a. Level of Education:
   (0) Certificate [ ]
   (1) Diploma [ ]
   Degree [ ]
   (2) First Degree [ ]
   (3) Second Degree [ ]
4b Describe how you keep yourself up to date with recent scientific advances on the health care management of diabetes mellitus.

5. The following questions are about team working and relate to the group of people that you work with most closely.

   a. Do you work in a team?
      1. Yes [ ] (1)
      2. No [ ] (0)

   If NO, go to Question 33 where you have the open ended questions

   If YES, please answer the following questions about the main team or group you work in:

   b. Does your team have clear objectives?
      1. Yes [ ] (1)
      2. No [ ] (0)

   c. Do you have to work closely with other team members to achieve the team’s objectives?
      1. Yes [ ] (1)
      2. No [ ] (0)

   d. Does the team meet regularly to discuss its effectiveness and how it could be improved?
      1. Yes [ ] (1)
      2. No [ ] (0)

   e. How many people (the core members) are there in your team?
      1. 2 – 5  [ ] (0)
      2. 6 – 9  [ ] (1)
      3. 10 – 15 [ ] (2)
      4. more than 15 [ ] (3)
6. The following questions contain statements about your teamwork. Next to each question, indicate how often your team displays each behavior by using the following scoring system:

- Almost never - 1
- Seldom - 2
- Occasionally - 3
- Frequently - 4
- Almost always – 5

1. __ We try to have set procedures or protocols to ensure that things are orderly and run smoothly (e.g. minimize interruptions, everyone gets the opportunity to have their say).

2. ____ We are quick to get on with the task on hand and do not spend too much time in the planning stage.

3. ____ Our team feels that we are all in it together and shares responsibilities for the team's success or failure.

4. ____ We have thorough procedures for agreeing on our objectives and planning the way we will perform our tasks.

5. ____ Team members are afraid or do not like to ask others for help.

6. ____ We take our team's goals and objectives literally, and assume a shared understanding.

7. ____ The team leader tries to keep order and contributes to the task at hand.
8. _____ We do not have fixed procedures, we make them up as the task or project progresses.

9. _____ We generate lots of ideals, but we do not use many because we fail to listen to them and reject them without fully understanding them.

10. _____ Team members do not fully trust the others members and closely monitor others who are working on a specific task.

11. _____ The team leader ensures that we follow the procedures, do not argue, do not interrupt, and keep to the point.

12. _____ We enjoy working together; we have a fun and productive time.

13. _____ We have accepted each other as members of the team.

14. _____ The team leader is democratic and collaborative.

15. _____ We are trying to define the goal and what tasks need to be accomplished.

16. _____ Many of the team members have their own ideas about the process and personal agendas are rampant.

17. _____ We fully accept each other's strengths and weakness.
18. _____ We assign specific roles to team members (team leader, facilitator, time keeper, note taker, etc.).

19. _____ We try to achieve harmony by avoiding conflict.

20. _____ The tasks are very different from what we imagined and seem very difficult to accomplish.

21. _____ Concepts and issues are discussed in an abstract manner and some members may feel impatient.

22. _____ We are able to work through group problems.

23. _____ We argue a lot even though we agree on the real issues.

24. _____ The team is often tempted to go above the original scope of the project.

25. _____ We express criticism of others constructively.

26. _____ There is a close attachment to the team.

27. _____ It seems as if little is being accomplished with the project's goals.
28. _____ The goals we have established seem unrealistic.

29. _____ Although we are not fully sure of the project's goals and issues, we are excited and proud to be on the team.

30. _____ We often share personal problems with each other.

31. _____ There is a lot of resisting of the tasks on hand and quality improvement approaches.

32. _____ We get a lot of work done.
1. Participation in the team

This part concerns how much participation there is in your team. Please tick the most appropriate response to you for each question.

To what extent do you agree with the following?

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither agree nor Disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1_2) 2. We have a &quot;we are in it together&quot; attitude.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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<tr>
<td>(1_5) 5. People keep each other informed about work-related issues in the team.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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</tr>
<tr>
<td>(1_6) 6. People feel understood and accepted by each other.</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>[ ]</td>
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</tr>
<tr>
<td>(1_9) 9. There are real attempts to share information throughout the team.</td>
<td>[ ]</td>
<td>[ ]</td>
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</tr>
<tr>
<td>(1_13) 13. There is a lot of give and take.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>[ ]</td>
</tr>
<tr>
<td>(1_14) 14. We keep in touch with each other as a team.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>
2. Support for new ideas

This part deals with attitudes towards change in your team. Please indicate how strong you agree or disagree with each of the following statements as a description of your team by ticking the appropriate box.

To what extent do you agree with the following?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither agree nor Disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2_1) 1. The team is always moving toward the development of new answers.</td>
<td>[ ]</td>
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<td>(0)</td>
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<td>(4)</td>
</tr>
<tr>
<td>(2_3) 3. This team is open and responsive to change.</td>
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<td>(4)</td>
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<tr>
<td>(2_5) 5. People in this team are always searching for new ways of looking at problems.</td>
<td>[ ]</td>
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<tr>
<td></td>
<td>(0)</td>
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<tr>
<td>(2_9) 9. Members of the team provide and share resources to help in the application of new ideas.</td>
<td>[ ]</td>
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<td>(0)</td>
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<td>(4)</td>
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<tr>
<td>(2_10) 10. Team members provide practical support for new ideas and their application.</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>(0)</td>
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</tr>
</tbody>
</table>
3. Team Objectives

The following statements concern your understanding of your team’s objectives. Tick the appropriate box to indicate how far each statement describes your team.

<table>
<thead>
<tr>
<th>(3_1) 1. How clear are you about what your team’s objectives are?</th>
<th>Not at all</th>
<th>Somewhat</th>
<th>Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(0)</td>
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<td>(6)</td>
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</table>

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<thead>
<tr>
<th>(3_3) 3. How far are you in agreement with these objectives?</th>
<th>Not at all</th>
<th>Somewhat</th>
<th>Completely</th>
</tr>
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<tbody>
<tr>
<td></td>
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<td></td>
<td>(6)</td>
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</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(3_4) 4. To what extent do you think other team members agree with these objectives?</th>
<th>Not at all</th>
<th>Somewhat</th>
<th>Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(0)</td>
<td>(1)</td>
<td>(2)</td>
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<td>(3)</td>
<td>(4)</td>
<td>(5)</td>
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<td></td>
<td>(6)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>(3_11) 11. To what extent do you think members of your team are committed to these objectives?</th>
<th>Not at all</th>
<th>Somewhat</th>
<th>Completely</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>(5)</td>
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<td></td>
<td>(6)</td>
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</tbody>
</table>
4. Task Style

The questions below concern how you feel the team monitors and appraises the work it does. Consider to what extent each of the following questions describes your team. Please tick the box under the response you think best describes your team.

<table>
<thead>
<tr>
<th></th>
<th>To a very little extent</th>
<th>To some extent</th>
<th>To a very great extent</th>
</tr>
</thead>
<tbody>
<tr>
<td>(4_1) 1. Do your team colleagues provide useful ideas and practical help to enable you to do the job to the best of your ability?</td>
<td>[ ] (0)</td>
<td>[ ] (1)</td>
<td>[ ] (2)</td>
</tr>
<tr>
<td>(4_3) 3. Are team members prepared question the basis of what the team is doing?</td>
<td>[ ] (0)</td>
<td>[ ] (1)</td>
<td>[ ] (2)</td>
</tr>
<tr>
<td>(4_4) 4. Does the team critically appraise potential weaknesses in what it is doing in order to achieve the best possible outcome?</td>
<td>[ ] (0)</td>
<td>[ ] (1)</td>
<td>[ ] (2)</td>
</tr>
<tr>
<td>(4_5) 5. Do members of the team build on each other’s ideas in order to achieve the highest possible standards of performance?</td>
<td>[ ] (0)</td>
<td>[ ] (1)</td>
<td>[ ] (2)</td>
</tr>
</tbody>
</table>
33. For those who answered No please answer the following questions:

33a. Give your reasons why you do not work in a team

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

33b. Do you agree that working in a team would improve the diabetes care?

Yes [ ] No [ ] Do not know [ ]

(1) (0) (2)

33c. What do you think needs to be done for teamwork to take place in the Diabetes Clinic in the Primary Health Care?

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

34. Other comments:

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Thank you for taking the time to complete this questionnaire

Please place the completed questionnaire in the provided envelop. The researcher will collect it herself one week after distribution
How satisfied are you with the care you receive at the Diabetes Clinic at the Health Centre

Please write your answer in the space provided or tick with and 'X' the box / boxes that apply.

1. Date: .......................... Age: ..............

2. Male [ ] (0) Female [ ] (1)

3a. Single [ ] (0) Widow/er [ ] Separated [ ] Divorced [ ] (2)
    Married [ ] (1)

3b. Do you have someone, not your partner, husband or wife, who lives with you and gives you support?
    Iva [ ] (1) Le [ ] (0)

4. Level of Education:
    Primary [ ] (0) Secondary [ ] (1) Tertiary [ ] (2)

5. Occupation:
    Pensioner [ ] (0) Housewife [ ] (1) Employed as: ..........................(2)
6. The following statements deal with the extent to which you feel satisfied with the care provided by your doctor/s

To what extent do you agree with the following?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither agree nor Disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>6a. The doctor/s take/s my problems seriously</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>6b. The doctor/s is/are concerned about my condition and problems while treating me</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>6c. The doctor/s explain/s the results of tests and treatment clearly</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>

7. The following statements deal with the extent to which you feel satisfied with the care provided by your nurse/s

To what extent do you agree with the following?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither agree nor Disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>7a. The nurse/s take/s my problems seriously</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>7b. The nurse/s paid enough attention to my needs</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>7c. The nurse/s was professional while treating me</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>
8. The following statements deal with the extent to which you feel satisfied with the care provided by your chiropodist/s

To what extent do you agree with the following?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither agree nor Disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>8a. The chiropodist/s take/s my problems seriously</td>
<td>[ ] (0)</td>
<td>[ ] (1)</td>
<td>[ ] (2)</td>
<td>[ ] (3)</td>
<td>[ ] (4)</td>
</tr>
<tr>
<td>8b. The chiropodist/s paid enough attention to my needs</td>
<td>[ ] (0)</td>
<td>[ ] (1)</td>
<td>[ ] (2)</td>
<td>[ ] (3)</td>
<td>[ ] (4)</td>
</tr>
<tr>
<td>8c. The chiropodist/s was/were professional while treating me</td>
<td>[ ] (0)</td>
<td>[ ] (1)</td>
<td>[ ] (2)</td>
<td>[ ] (3)</td>
<td>[ ] (4)</td>
</tr>
</tbody>
</table>

9. The following statements deal with the extent to which you feel satisfied with the care provided by your dietician

To what extent do you agree with the following?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither agree nor Disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>9a. The dietician takes my problems seriously</td>
<td>[ ] (0)</td>
<td>[ ] (1)</td>
<td>[ ] (2)</td>
<td>[ ] (3)</td>
<td>[ ] (4)</td>
</tr>
<tr>
<td>9b. The dietician paid enough attention to my needs</td>
<td>[ ] (0)</td>
<td>[ ] (1)</td>
<td>[ ] (2)</td>
<td>[ ] (3)</td>
<td>[ ] (4)</td>
</tr>
<tr>
<td>9c. The dietician was professional while treating me</td>
<td>[ ] (0)</td>
<td>[ ] (1)</td>
<td>[ ] (2)</td>
<td>[ ] (3)</td>
<td>[ ] (4)</td>
</tr>
</tbody>
</table>
10. The following statements deal with the extent to which you feel satisfied with the care provided by your diabetes specialist/s who come/s from SLH.

To what extent do you agree with the following?

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither agree nor Disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>10a. The diabetes specialist/s take/s my problems seriously</td>
<td>[ ]</td>
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<tr>
<td></td>
<td>(0)</td>
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</tr>
<tr>
<td>10b. The diabetes specialist/s is/are concerned about my condition and problems while treating me</td>
<td>[ ]</td>
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<tr>
<td></td>
<td>(0)</td>
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<td>(3)</td>
</tr>
<tr>
<td>10c. The diabetes specialist/s explain/s the results of tests and treatment clearly</td>
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</tr>
<tr>
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<td>(3)</td>
</tr>
</tbody>
</table>

11. The following statements deal with the extent to which you feel satisfied with the care provided by your ophthalmologist.

To what extent do you agree with the following?

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither agree nor Disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>11a. The ophthalmologist takes my problems seriously</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>[ ]</td>
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<tr>
<td></td>
<td>(0)</td>
<td>(1)</td>
<td>(2)</td>
<td>(3)</td>
</tr>
<tr>
<td>11b. The ophthalmologist is concerned about my condition and problems while treating me</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>[ ]</td>
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<tr>
<td></td>
<td>(0)</td>
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<td>(3)</td>
</tr>
<tr>
<td>11c. The ophthalmologist explains the results of tests and treatment clearly</td>
<td>[ ]</td>
<td>[ ]</td>
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<tr>
<td></td>
<td>(0)</td>
<td>(1)</td>
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<td>(3)</td>
</tr>
</tbody>
</table>
12. The following statements deal with the extent to which you feel satisfied with the waiting times

To what extent do you agree with the following?

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither agree nor Disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>12a.</td>
<td>I was well informed about delays that I have experienced in the waiting room</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>12b.</td>
<td>I did not wait long in the treatment area before I was seen by the doctor</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
<td>12c.</td>
<td>The date given for the follow-up Appointment was satisfactory</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
</tbody>
</table>
13. The following statements deal with the extent to which you feel satisfied with the overall service

To what extent do you agree with the following?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Neither agree nor Disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I strongly recommend the Diabetes clinic to others</td>
<td>[ ]</td>
<td>[ ]</td>
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<tr>
<td>The diabetes care I receive is worth attending</td>
<td>[ ]</td>
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</tr>
</tbody>
</table>

Other comments
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________
_________________________________________________________________________

Thank you for taking the time to complete this questionnaire.

Please send the completed questionnaire in the self-addressed envelop by not later than _____
Appendix 2

Team and Patient Satisfaction Questionnaires (Maltese)
Kwestjonarju dwar il-Hidma bhala Tim bejn id-Dixxiplini fil-Kura tad-Dijabete

(Kwestjonarju għall-Professjoni fil-Tim Għall-Kura Tad-Dijabete fil-Kura Primarja)

Kodiċi

Jekk jogħġbok ikteb ir-risposta tieghek fl-ispazju pprovdut jew immarka b'X ir-risposta tieghek fil-kaxxa / kaxxi fejn faqbel.

1. Data: ...................... Età: ...............  

2. (0) Raġel [ ] (1) Mara [ ]

3a. X'inhi l-professjoni tieghek?
   (0) Tabib [ ]
   (1) Ners [ ]
   (2) Kiropodista [ ]
   (3) Espert tad-dieta (Dietician) [ ]
   (4) Endokrinologista (Endocrinologist) [ ]
   (5) Oftalmologu (Ophthalmologist) [ ]

3b Iggradwajt fis-sena ..............

4a. L-oghla kwalifika li ghandek hija:
   (0) Ħertifikat [ ]
   (1) Diploma [ ]
   Llawrja (degree) [ ]
   (2) L-ewwel lawrja (degree) [ ]
   (3) It-tieni lawrja (degree) [ ]
4b Iddeskrivi kif iżomm ruhek aggiornat dwar l-ahhar żviluppi xjentifiki dwar il-kura tad-dijabete 


a. Intom tahdmu bhala tim?
   1. Iva [ ] (1) 2. Le [ ] (0)

Jekk Le mur ghall-mistoqsija numru 33

Jekk Iva wieġeb il-mistoqsijiet li ġejjin dwar it-tim jew gruppi li taħdem fih:

b. L-ghanijiet tat-tim taghkom huma ċari:
   1. Iva [ ] (1) 2. Le [ ] (0)

c. Biex jintlahqu l-ghanijiet inti jkollok taħdem mill-qrib ma’ membri ohra tat-tim:
   1. Iva [ ] (1) 2. Le [ ] (0)

d. It-tim jiltaqa’ regolarment biex jiddiskuti kemm qed ikun effettiv u kif jista’ jtejjeb ix-xoghol tieghu:
   1. Iva [ ] (1) 2. Le [ ] (0)

e. Kemm hemm membri li jiffurmaw il-bażi tat-tim?
   1. 2 – 5 [ ] (0) 2. 6 – 9 [ ] (1)
   3. 10 – 15 [ ] (2) 4. izjed minn 15 [ ] (3)

- Kwaţi qatt = 1
- Rari = 2
- Kultant = 3
- Ta' Spiss = 4
- Kwaţi dejjem = 5

1. ____ It-tim jipprovja jfassal procéduri u protokolli biex ix-xoghol jimxi bl-ordni u minghajr intoppi (ez. jitnaqqsu l-interruzzjonijiet, kulhadd ikollu ċ-ċans jghid tieghu).

2. ____ It-tim ilesti malajr ix-xoghol li jkun hemm bżonn isir minghajr ma jahli hin żejjed fl-ippjanar biss.

3. ____ It-tim ihoss li ghandu responsabbiltà kollettiva u ghalhekk ir-responsabbiltà tas-suċċessi u fallimenti tintrefa' bhala tim.

4. ____ It-tim ghandu procéduri stabbiliti dwar kif kif il-membri jiftiehmu dwar l-ghanijiet li jridu jintlahqu u dwar kif jippjana x-xoghol li ghandu jsir.

5. ____ Il-membri tat-tim jiddejqu u ma jhossuhomx komdi jitolbu l-ghajnuna lil xulxin.

6. ____ Kull membru tat-tim isegwi l-miri u l-ghanijiet sa l-inqas dettal u hemm qbil kollettiv dwar dan.

7. ____ Il-mexxej tat-tim jipprova jżomm l-ordni u jghin fix-xoghol li jkun hemm bżonn isir.
8. It-tim ma ghandux proċeduri stabbiliti; kull membru jahdem skond il-bżonn tal-każ li jkun qed jahdem fuqu.

9. Fit-tim hemm hafna ideat, imma hafna minnhom ma jintużawx għax ma nisimgħux biżżejjed lil xulxin, u nwarbu l-ideat mingħajr ma nkunu flimniehom sew.

10. Il-membri tat-tim ma jafdawx lil xulxin, u hsiebhom wiehed fl-iehor meta tkun qed issir xi bċċa xoghol.


12. Il-membri tat-tim jiehdu pjaċir jahdmu flimkien, u l-hin tax-xoghol hu pjaċevoli u produttiv.

13. Il-membri tat-tim aċċettaw lil xulxin bhala shab fit-tim.


15. It-tim għadu qed jipprova jifinalizza l-iskopiet tieghu u x-xoghol li hemm bżonn jagħmel.


17. Il-membri tat-tim jaċċettaw il-hilliet u d-difetti ta' xulxin.
18. Kull membru tat-tim jinghata funzjoni speċifika (eż: mexxej tat-tim, facilitator, time keeper, segretarju, eċċ)

19. It-tim jipprovajandem fl-armonija u jevita l-konflitt.


21. Ikun hemm hafna diskussjonijiet astratti fuq kunċetti u kwistjonijet, tant li xi membri jitilfu l-pacenzja b’diskussjonijiet bhal dawn.

22. It-tim kapaċi jaħdem fuq il-problemi tal-grupp.

23. It-tim jargumenta hafna għalkemm ġeneralment jaqbel fuq kwistjonijiet essenzjali.

24. Kultant it-tim jaqa’ fit-tentazzjoni li jiżvija mill-ghanijiet originali ta’ dan il-proġett.

25. Il-membri tat-tim jikkritikaw lil xulxin b’mod kostruttiv.


28. ____ L-iskopijiet li stabilixxa t-tim ma humiex realistiċi.

29. ____ Għalkemm il-membri tat-tim ma humiex ċerti dwar l-ghanijiet ta' dan il-proġett, il-membri xorta huma eċitati u kburin li qegħdin fit-tim.

30. ____ Il-membri tat-tim spiss jiftnu qalbhom ma' xulxin dwar problemi personali.

31. ____ Hemm ċerta reżistenza ghax-xoghol li qed isir u għat-titjib tal-kwalità tax-xoghol.

32. ____ It-tim jagħmel hafna xoghol.
1. Partecipazzjoni fit-tim

Din il-parti hija dwar il-partecipazzjoni li hemm fit-tim. Jekk joghġbok immarka b’X risposta wahda fil-kaxxa fejn jabel.

Kemm taqbel mal-frażijiet li ġejjin?

<table>
<thead>
<tr>
<th>(1_2) 2. It-tim ihoss li ghandu responsabilità kollettiva f’dan il-proġett.</th>
<th>Assolutament</th>
<th>Ma naqbilx</th>
<th>Ma naqbilx</th>
<th>M’handix opinjoni</th>
<th>Naqbel</th>
<th>Naqbel perfettament</th>
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<table>
<thead>
<tr>
<th>(1_5) 5. Il-membri tat-tim izommu lil xulxin infurmati dwar materji relatata max-xoghol.</th>
<th>Assolutament</th>
<th>Ma naqbilx</th>
<th>Ma naqbilx</th>
<th>M’handix opinjoni</th>
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<tr>
<th>(1_6) 6. Il-membri tat-tim jifhmu u jaċċettaw lil xulxin.</th>
<th>Assolutament</th>
<th>Ma naqbilx</th>
<th>Ma naqbilx</th>
<th>M’handix opinjoni</th>
<th>Naqbel</th>
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<table>
<thead>
<tr>
<th>(1_9) 9. Il-membri tat-tim lesti li jaqsmu informazzjoni ma’ xulxin.</th>
<th>Assolutament</th>
<th>Ma naqbilx</th>
<th>Ma naqbilx</th>
<th>M’handix opinjoni</th>
<th>Naqbel</th>
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</table>

<table>
<thead>
<tr>
<th>(1_13) 13. Il-membri tat-tim lesti li jiedu u jaqsmu ma’ xulxin</th>
<th>Assolutament</th>
<th>Ma naqbilx</th>
<th>Ma naqbilx</th>
<th>M’handix opinjoni</th>
<th>Naqbel</th>
<th>Naqbel perfettament</th>
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</table>

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<thead>
<tr>
<th>(1_14) 14. Il-membri tat-tim izommu ruhhom f’kuntatt kontinwu ma’ xulxin.</th>
<th>Assolutament</th>
<th>Ma naqbilx</th>
<th>Ma naqbilx</th>
<th>M’handix opinjoni</th>
<th>Naqbel</th>
<th>Naqbel perfettament</th>
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</tbody>
</table>
2. Appoqg ghal ideat godda

Din il-parti hija dwar l-attitudni tat-tim meta jkun hemm bżonn ta' tibdil. Jekk jogħbok immarka b'X risposta wahda fil-kaxxa fejn jabel.

Kemm taqbel mal-frażijiet li ġejjin?

<table>
<thead>
<tr>
<th></th>
<th>Assolutament</th>
<th>Ma naqbilx</th>
<th>M'għandix opinjoni</th>
<th>Naqbel</th>
<th>Naqbel perfettament</th>
</tr>
</thead>
<tbody>
<tr>
<td>(2_1) 1.</td>
<td>It-tim dejjem ifittex metodi godda u ahjar ta' kif jahdem.</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>[ ]</td>
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<td>(3)</td>
</tr>
<tr>
<td>(2_3) 3.</td>
<td>It-tim huwa miftuh u lest ghal kull tibdil li jkun hemm bżonn.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
</tr>
<tr>
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<td>(3)</td>
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<tr>
<td>(2_5) 5.</td>
<td>Il-membri tat-tim dejjem ifittxu metodi godda ta' kif l-ahjar li jsolvu l-problemi.</td>
<td>[ ]</td>
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<tr>
<td>(2_9) 9.</td>
<td>Il-membri tat-tim jaqsmu u jipprovdu rizors biex ikunu jistghu iwettqu ideat godda.</td>
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<tr>
<td>(2_10) 10.</td>
<td>Il-membri tat-tim jipprovdu ghajnuna prattika biex ikunu jistghu iwettqu ideat godda.</td>
<td>[ ]</td>
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</tbody>
</table>
3. L-Ghanijiet tat-Tim

Din il-parti li ġejja hija dwar kemm tifhem l-ghanijiet tat-tim. Jekk jogħġbok immarka b’X risposta wahda fil-kaxxa fejn jabel.

Kemm taqbel mal-frażijiet li ġejjin?

<table>
<thead>
<tr>
<th>Assolutament</th>
<th>Ma naqbilx</th>
<th>Ma naqbilx</th>
<th>M’ghandix opinjoni</th>
<th>Naqbel</th>
<th>Naqbel perfettament</th>
</tr>
</thead>
<tbody>
<tr>
<td>(3_1) 1. Inti bhala membru tat-tim taf u tifhem x’inhuma l-ghanijiet tat-tim</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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</tr>
<tr>
<td>(3_3) 3. Inti taqbel ma’ l-ghanijiet tat-tim</td>
<td>[ ]</td>
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<td>[ ]</td>
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<tr>
<td>(3_4) 4. Il-membri l-ohra tat-tim jaqblu ma’ l-ghanijiet li ghandu t-tim?</td>
<td>[ ]</td>
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<tr>
<td>(3_11) 11. L-membri tat-tim huma kommessi li jilhq l-ghanijiet stabbiliti mit-tim?</td>
<td>[ ]</td>
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</tbody>
</table>
**4. Ix-Xoghol Tat-Tim.**

Il-mistoqsijiet li ġejjin huma dwar kif it-tim ikejjel u jassessja ix-xoghol li jaghmel. Jekk joghġbok immarka b'X risposta wahda fil-kaxxa fejn jabel.

Kemm taqbel mal-frazijiet li ġejjin?

<table>
<thead>
<tr>
<th></th>
<th>Assolutament</th>
<th>Ma naqblix</th>
<th>Ma naqblix opinjoni</th>
<th>Naqbel</th>
<th>Naqbel perfettament</th>
</tr>
</thead>
<tbody>
<tr>
<td>(4_1) 1. Il-kollegi tieghek fit-tim joffr ideat u ghajnuna prattika biex jghinuk taghmel xoghlok skond l-abbiltà u l-hila tieghek.</td>
<td>[ ]</td>
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<tr>
<td>(4_3) 3. Il-membri tat-tim lesti jeżaminaw ezattament kif qed jahdem it-tim.</td>
<td>[ ]</td>
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</tr>
<tr>
<td>(4_4) 4. It-tim jevalwa serjament xi nuqqasijiet li jista' jkollu dwar kif qed jahdem bl-ghan li jtejjeb il-hidma tieghu.</td>
<td>[ ]</td>
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<tr>
<td>(4_5) 5. Il-membri tat-tim jibnu fuq l-ideat ta' xulxin biex jiksbu l-ahjar rizultat possibli fix-xoghol taghhom.</td>
<td>[ ]</td>
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</tr>
</tbody>
</table>
33. Dawk li wiegħu LE jekk jogħġobhom iwiegħu l-mistoqsijiet li ġejjin:

(33a) a. Agti r-ragunijiet tieghek ghalix ma tahdimx go tim ___________

(33b) b. Taqbel li jekk tahdem f’tim il-kura ghad-dijabete titjieb?

Iva [ ] (1) Le [ ] (0) Ma naflx [ ] (2)

(33c) ċ. X’tahseb li hemm bżonn isir biex ikun hemm ħidma bhała tim fil-kura ghad-dijabete fil-Kura Primarja?

Kummenti ohrajn: ________________________________

Nixtieq nirringrazzjak talli mlejt dan il-kwestjonarju!

Jekk jogħġbok, x’hin tlesti, porggi l-kwestjonarju fl-enelowp li ghandek miegħu. Se niġbor il-kwestjonarju ġimgħa wara li nkun qassamtu.
Il-Klinika tad-Dijabete fiċ-Ċentru Tas-Sahha
Kwestjonarju li jkejjel kemm int sodisfatt/a bil-kura li tinghata f'din il-Klinika

Kodiċi

Jekk joghġbok ikteb ir-risposta tieghek fl-ispazju pprovdut jew immarka b'X ir-risposta tieghek fil-kaxxa / kaxxi fejn jaqbel.

1. Data: ....................... Età: ............... 

2. Ragel [ ] (0) Mara [ ] (1)

3a. Guvni / xebba [ ] (0) Armel [ ] Separat/a [ ] Divorzjat/a [ ] (2)
    Miżżewweġ/a [ ] (1)

3b. Ghandek lil xi hadd li mhux il-‘partner’/ ir-ragel jew il mara, li jghix mieghek u jaghtik l-ghajnuna

    Iva [ ] (1)
    Le [ ] (0)

4. Edukazzjoni:

    Primarja [ ] (0) Sekondarja [ ] (1) Terzjarja [ ] (2)

5. X’inhu x-xoghol tieghek

    Pensjonant/a [ ] (0) Mara tad-dar [ ] (1) Xoghol / Sengħa: .........................(2)

Kemm taqbel mal-frazijiet li ġejjin?

<table>
<thead>
<tr>
<th>Assolutament</th>
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<th>Naqbel</th>
<th>Naqbel perfettament</th>
</tr>
</thead>
<tbody>
<tr>
<td>6a. It-tabib jikkunsidra l-problemi tieghi bis-serjetà.</td>
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<tr>
<td>6b. It-tabib interessa ruħu fil-qaghda u l-problemi tieghi</td>
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<tr>
<td>6c. It-tabib spjegali tajjeb ir-rizultati tat-testijiet li għamilli u kull trattament li tani</td>
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Kemm taqbel mal-frazijiet li ġejjin?

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<th>Ma naqbilx</th>
<th>M’għandix opinjoni</th>
<th>Naqbel</th>
<th>Naqbel perfettament</th>
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<tbody>
<tr>
<td>7a. In-nersis jikkunsidraw il-problemi tieghi bis-serjetà.</td>
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<td>7b. In-nersis taw każ bżżejjed tal-bzonnijiet tieghi.</td>
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<td>7c. In-nersis kienu professionali fil-kura li tawni.</td>
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<tbody>
<tr>
<td>8a. Il-kiropodista jikkunsidra l-problemi tieghi bis-serjetà.</td>
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<td>8b. Il-kiropodista ta każ biżżejjed tal-bżonnijiet tieghi.</td>
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<td>8c. Il-kiropodista kien professjonali fil-kura li tani.</td>
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<th>Naqbel perfettament</th>
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<tbody>
<tr>
<td>9a. Id-dietician ikkunsidra l-problemi tieghi bis-serjetà.</td>
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<tr>
<td>9b. Id-dietician ta każ biżżejjed tal-bżonnijiet tieghi.</td>
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<td>9c. Id-dietician kien professjonali fil-kura li tani.</td>
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<th>Naqbel perfettament</th>
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<tr>
<td>10a. Il-konsulent jikkunsidra l-problemi tieghi bis-serjetà.</td>
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<tr>
<td>10b. Il-konsulent interessa ruhu fil-qaghda u l-problemi tieghi</td>
<td>[ ] (0)</td>
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<tr>
<td>10c. Il-konsulent spjegali tajjeb ir-rizultati tat-testijiet li ghamilli u kull trattament li tani.</td>
<td>[ ] (0)</td>
<td>[ ] (1)</td>
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<th>Naqbel perfettament</th>
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<tbody>
<tr>
<td>11a. L-ispecjalista jikkunsidra l-problemi tieghi bis-serjetà.</td>
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<td>[ ] (1)</td>
<td>[ ] (2)</td>
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<tr>
<td>11b. L-ispecjalista interessa ruhu fil-qaghda u l-problemi tieghi</td>
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<td>[ ] (2)</td>
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<tr>
<td>11c. L-ispecjalista spjegali tajjeb ir-rizultati tat-testijiet li ghamilli u kull trattament li tani.</td>
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<th>Naqbel</th>
<th>Naqbel perfettament</th>
</tr>
</thead>
<tbody>
<tr>
<td>12a. Kull meta domt nistenna fil-\textit{waiting room} dejjem tawni spjegazzjoni ta’ x’kienet ir-raguni.</td>
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<tr>
<td>12b. Il-hin li domt nistenna biex nara t-tabib kien aċċettabli.</td>
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<tr>
<td>12c. I’d-data li tawni biex nerga’ ċinżur il-klinika (\textit{follow up appointment}) kienet sodisfacenti.</td>
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<th>M’ghandix opinjoni</th>
<th>Naqbel</th>
<th>Naqbel perfettament</th>
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</thead>
<tbody>
<tr>
<td>13a.</td>
<td>Dan is-servizz nirrakkomandah lill-familja u l-hbieb tieghi.</td>
<td>[ ] (0)</td>
<td>[ ] (1)</td>
<td>[ ] (2)</td>
<td>[ ] (3)</td>
</tr>
<tr>
<td>13b.</td>
<td>Il-viżita tieghi f’din il-Klinika kienet sodisfaċenti.</td>
<td>[ ] (0)</td>
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<td>[ ] (3)</td>
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</tbody>
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Kummenti ohrajn


Nixtieq nirringrazzjak talli mlejt dan il-kwestjonaru!

_Jekk jogħġbok, x’hin tlesi, poġgi l-kwestjonaru fl-envelowp li ghandek mieghu u ibaghtu bil-posta sa mhux iktar tad mi........................._
Appendix 3

Questionnaires (Back translated from Maltese to English)
Interdisciplinary Teamwork in Diabetes Care Questionnaire
(To be filled by the professional team working in the Diabetes Care in the Primary Health Care)

Code Number

Please write your answer in the space provided or indicate with an ‘X’ in the box/es that apply.

1. Date: ...................... Age: ................

2. (0) Male [ ] (1) Female [ ]

3a. What is your profession?
   (0) Doctor [ ]
   (1) Nurse [ ]
   (2) Chiropodist [ ]
   (3) Dietician [ ]
   (4) Endocrinologist [ ]
   (5) Ophthalmologist [ ]

3b. Graduated in .............

4a. Level of education:
   (0) Certificate [ ]
   (1) Diploma [ ]
      degree [ ]
   (2) First degree [ ]
   (3) Second degree [ ]
4b How do you keep yourself up-to-date on the latest scientific developments in the treatment of diabetes ................................................ ..........................................................
........................................................................................................................................................................................................................................

5. The following questions are about teamwork and how you relate with the group you work most closely with.

a. Do you work as a team?
   
   1. Yes [ ] (1)  
   2. No [ ] (0)

If NO go to question 33

If YES answer the following questions on the team/group you work with:

b. Are the aims of your team clear:
   
   1. Yes [ ] (1)  
   2. No [ ] (0)

c. In order to achieve your aims you need to work closely with the other team members.
   
   1. Yes [ ] (1)  
   2. No [ ] (0)

d. The team meets regularly to discuss its effectiveness and the possibility of Improvement.
   
   1. Yes [ ] (1)  
   2. No [ ] (0)

e. How many members are there in your team?
   
   1. 2 – 5 [ ] (0)  
   2. 6 – 9 [ ] (1)
   3. 10 – 15 [ ] (2)  
   4. More than 15 [ ] (3)
6. The following are statements about your team. Please put a number (according to the indicators provided below for each statement to show your team’s behaviour.

- Almost never = 1
- Rarely = 2
- At times = 3
- Often = 4
- Almost always = 5

1. ____ The team tries to come up with procedures and protocols so that things run smoothly (e.g. reduce interruptions, equal opportunity for discussion).

2. ____ The team manages to finish work on time without wasting lots of time on excessive planning.

3. ____ The team feels a collective responsibility; thus the team shares in the responsibility of success or failure

4. ____ The team has fixed procedures on how to agree on the aims to be achieved and the planning of work to be done.

5. ____ The team members do not feel comfortable asking each other for help

6. ____ Each team member follows accurately the aims to be achieved and there is a collective agreement on the latter.

7. ____ The team leader tries to keep order and helps in the work to be done.
8. The team has no fixed procedures: each member works according to the case in progress.

9. Lots of ideas are provided but not followed up as we fail to listen attentively to each other, resulting in discarding these same ideas due to lack of understanding.

10. There is lack of trust among the team members and they closely supervise each other during a specific task.

11. The team leader coordinates each member according to fixed procedures.

12. The team members enjoy working together and the working hours are enjoyable and productive.

13. The team members regard each other as friends.

14. The team leader loves helping and has a democratic approach.

15. The team is still trying to finalize its aims and the tasks to be undertaken.

16. Many team members have exclusive ideas on how the tasks should be undertaken and they work accordingly.

17. The team members accept each others’ strengths and weaknesses.
18. _____ Each team member has a specific task, (e.g. leader, facilitator, time keeper, secretary, etc)

19. _____ The team tries to work in harmony and avoids conflicts.

20. _____ In practice, the team’s job is very different from expected and it’s very difficult for the task to be achieved.

21. _____ Many issues and concepts are discussed abstractedly, thus leading to impatience.

22. _____ The team is able to work of group problems.

23. _____ A lot of arguing takes place, even though essential issues are generally agreed upon.

24. _____ At times, the team tends to ‘steer clear’ from the original aims of the project.

25. _____ Constructive criticism takes place among team members.

26. _____ Team members feel close to each other.

27. _____ The team seems to be achieving few of the aims of this project.
28. The aims set by the team are not realistic.

29. Although the team members are uncertain about the aims of this project, they are still excited and proud to form part of the team.

30. Team members often share personal problems.

31. There is resistance for work being done and for the quality improvement.

32. Lots of work is accomplished by the team.
1. Participation of the Team

This section deals with participation in the team. Please indicate with an ‘x’ in the appropriate box.

How far do you agree with the following statements?

<table>
<thead>
<tr>
<th></th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
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<tr>
<td>(1_2) 2. The team feels a collective responsibility in this project.</td>
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<td>(1_5) 5. The team members inform each other on work related data.</td>
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<td>(1_6) 6. The team members understand and accept each other.</td>
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<td>(1_9) 9. The team members share information.</td>
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<td>(1_13) 13. The team members have a ‘give and take’ attitude.</td>
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<td>(1_14) 14. The team members keep in touch regularly.</td>
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2. Support for new ideas

This section deals with the team’s attitude towards change. Please indicate with an ‘x’ in the box provided.

How far do you agree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
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<tr>
<td>(2_1) 1. The team is always on the look-out for innovative working methods.</td>
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<td>(2_3) 3. The team is ready for any change needed.</td>
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<tr>
<td>(2_5) 5. The team members are always on the look out for new and better methods for solving problems.</td>
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<td>(2_9) 9. The team members share and provide resources on how to apply new ideas.</td>
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<td>(2_10) 10. The team members provide practical aid to put new ideas in practice.</td>
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</table>
3. The Team’s objectives

This section deals with your understanding of the Team’s aims. Please indicate with an ‘x’ in the box provided.

How far do you agree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Neither agree nor disagree</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
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<tbody>
<tr>
<td>(3_1) 1. As a member of the team you know and understand the team’s objectives.</td>
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<td>(3_3) 3. You agree with the teams objectives.</td>
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<td>(3_4) 4. Do the other team members agree with the aims of the team?</td>
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<td>(3_11) 11. Are the team members committed on achieving the aims established by the team?</td>
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</table>
4. The Team’s Tasks.

The following statements deal with how the team assesses and measures the tasks done. Please indicate with an ‘x’ in the box provided.

How far do you agree with the following statements?

| (4_1) 1. Your team colleagues offer ideas and help to aid your work according to your abilities. | Strongly disagree | Disagree | Neither agree nor disagree | Agree | Strongly agree |
| (4_3) 3. The team members are ready to analyze how the team works. | (0) | (1) | (2) | (3) | (4) |
| (4_4) 4. There’s serious evaluation on the team’s weaknesses in order to achieve better results. | (0) | (1) | (2) | (3) | (4) |
| (4_5) 5. the team members amplify each other’s Ideas for the best possible results in the tasks undertaken. | (0) | (1) | (2) | (3) | (4) |
33. If you answered NO to question 5A please answer the following questions:

(33a) a. Give your reason why you do not work in a team. __________________________

(33b) b. Do you agree that working in a team would improve the treatment of diabetes?

Yes [ ] (1)  
No [ ] (0)  
Do not know [ ] (2)

(33c) c. What do you think should be done for teamwork to succeed in the Diabetes Treatment in the Primary H.C.?

__________________________

__________________________

__________________________

Other comments : __________________________

__________________________

__________________________

Thank you for answering this questionnaire!

When ready please enclose the questionnaire in the envelope provided. It will be 
collected a week after it has been distributed.
The Diabetes Clinics in the Health Centres
A questionnaire that evaluates the patient’s satisfaction with the diabetes care received

Please write your answer in the space provided or tick with an ‘X’ in the box / boxes provided.

1. Date: ...................... Age: ......................

2. Male [ ] (0) Female [ ] (1)

3a. Single [ ] (0) Widower /er [ ] Separated [ ] Divorced [ ] (2)
    Married [ ] (1)

3b. Do you have a person other than your partner/husband/wife who lives in the same house and gives you assistance?
    yes [ ] (1) no [ ] (0)

4. Level of education:
    Primary [ ] (0) Sekondary [ ] (1) Tertiary [ ] (2)

5. What is your occupation?
    Retired [ ] (0) Housewife [ ] (1) Employed / Trade: .........................(2)
6. The following statements refer to how satisfied you are with the doctor’s care for diabetes in the Health Centre.

How far do you agree with the following statements?

<table>
<thead>
<tr>
<th>Statements</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>No opinion</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>6a. The doctor/s take/s my problems into serious account.</td>
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<tr>
<td>6b. The doctor/s take/s an interest in my health state and my problems</td>
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<tr>
<td>6c. The doctor/s explain/s my results and any treatment given in detail.</td>
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<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
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</tbody>
</table>

7. The following statements refer to how satisfied you are with the nurses’ care on diabetes in the Health Centre.

How far do you agree with the following statements?

<table>
<thead>
<tr>
<th>Statements</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>No opinion</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>7a. The nurse/s take/s my problems into serious account.</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>(0)</td>
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</tr>
<tr>
<td>7b. The nurse/s was/were very considerate of my needs.</td>
<td>[ ]</td>
<td>[ ]</td>
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</tr>
<tr>
<td>7c. The nurse/s was/were professional while attending to me.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>[ ]</td>
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<tr>
<td></td>
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<td>(4)</td>
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</tbody>
</table>
8. The following statements refer to how satisfied you are with the treatment given by the chiropodist at the Health Centre.

How far do you agree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>No opinion</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>8a. The chiropodist/s take/s my problems into serious account.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>(2)</td>
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<td>(4)</td>
</tr>
<tr>
<td>8b. The chiropodist/s take/s good care of my needs.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>[ ]</td>
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<td>(4)</td>
</tr>
<tr>
<td>8c. The chiropodist/s was/were professional in his/her treatment.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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<tr>
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<td>(4)</td>
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</table>

9. The following statement refer to how satisfied you are with the treatment given by the dietician at the Health Centre.

How far do you agree with the following statements?

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<th>Statement</th>
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<th>Disagree</th>
<th>No opinion</th>
<th>Agree</th>
<th>Strongly agree</th>
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</thead>
<tbody>
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<td>9a. The dietician/s take/s my problems into serious account.</td>
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<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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</tr>
<tr>
<td>9b. The dietician/s take/s good care of my needs.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>(4)</td>
</tr>
<tr>
<td>9c. The dietician/s was/were professional in His/her treatment.</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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<td>[ ]</td>
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<tr>
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<td>(2)</td>
<td>(3)</td>
<td>(4)</td>
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</table>
10. The following statements refer to how satisfied you are with the care given by the diabetes specialist/s from St. Luke’s Hospital.

How far do you agree with the following statements?

<table>
<thead>
<tr>
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<th>Strongly Disagree</th>
<th>Disagree</th>
<th>No opinion</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>10a. The diabetes specialist/s take/s my problems into serious account</td>
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<tr>
<td>10b. The diabetes specialist/s take/s an interest in my health state and problems</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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<tr>
<td></td>
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<td>(3)</td>
<td>(4)</td>
</tr>
<tr>
<td>10c. The diabetes specialist/s explain/s my results and any treatment given in detail</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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<tr>
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11. The following statements refer to how satisfied you are with the care given by the ophthalmologist/s at the Health Centre

How far do you agree with the following statements?

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>No opinion</th>
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<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>11a. The ophthalmologist/s take/s my problems into serious account</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
<td>[ ]</td>
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<tr>
<td>11b. The ophthalmologist/s take/s an interest in my health state and problems</td>
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<td>(4)</td>
</tr>
<tr>
<td>11c. The ophthalmologist/s explain/s my results any any treatment given in detail</td>
<td>[ ]</td>
<td>[ ]</td>
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</table>
12. The following statements refer to how satisfied you are with the waiting time

How far do you agree with the following statements?

<table>
<thead>
<tr>
<th></th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>No opinion</th>
<th>Agree</th>
<th>Strongly agree</th>
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</thead>
<tbody>
<tr>
<td>12a. I was always given an explanation for the delays in the waiting room</td>
<td>[ ] (0)</td>
<td>[ ] (1)</td>
<td>[ ] (2)</td>
<td>[ ] (3)</td>
<td>[ ] (4)</td>
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<tr>
<td>12b. The waiting time for the doctor's visit was acceptable.</td>
<td>[ ] (0)</td>
<td>[ ] (1)</td>
<td>[ ] (2)</td>
<td>[ ] (3)</td>
<td>[ ] (4)</td>
</tr>
<tr>
<td>12c. The date given for the follow up appointment was satisfactory.</td>
<td>[ ] (0)</td>
<td>[ ] (1)</td>
<td>[ ] (2)</td>
<td>[ ] (3)</td>
<td>[ ] (4)</td>
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</tbody>
</table>
13. The following statements refer to how satisfied you are with the overall diabetes service provided at the Health Centre

How far do you agree with the following statements?

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>No opinion</th>
<th>Agree</th>
<th>Strongly agree</th>
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</thead>
<tbody>
<tr>
<td>13a. I recommend the service to my family and my friends.</td>
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<td>[ ]</td>
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<td>[ ]</td>
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<tr>
<td></td>
<td>(0)</td>
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<td>(4)</td>
</tr>
<tr>
<td>13b. My visit to the diabetes clinic was satisfactory.</td>
<td>[ ]</td>
<td>[ ]</td>
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<tr>
<td></td>
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</tbody>
</table>

Other comments

________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

Thank you for answering this questionnaire.

When ready please enclose the questionnaire in the envelope provided and send by not later than ........
Appendix 4

Qualitative data collected from staff and patients
Question 33a:

Give your reasons why you do not work in a team

There is no feedback or else they do not know what a chiropodist work involves. The real work of a chiropodist is not just nails and corns.

Chiropodist

......no feedback from other staff, example the doctor, etc., after referring patients to them.

Chiropodist

You never make contact with the other nurses who run the dame clinics or any of the diabetic staff involved in the diabetes care. Sometimes you do feel you need to discuss with the other professionals, not just with the doctor, for the sake of the patient’s good health.

Nurse

Referral system does not work in the primary health sector. For professional reasons, teamwork is not very much encouraged especially in the medical practice.

Doctor

.....no structure that allows teamwork to take place

Doctor

The organization does not foster the culture for teamwork

Doctor

It is very important for the patient to be viewed on regular basis by the same multidisciplinary members, especially the doctor, the nurse, the chiropodist and the ophthalmologist, because we form part of the basic staff within the health centre. I also think that it shouldn’t be a problem even for the same endocrinologist and dietician to see the same patients. Maybe an agreement on who sees who should be established. After all continuity of care is a patient’s right.

Chiropodist

.....because there isn’t always the same doctor, so there is no continuity.
Doctor

The doctor changes every day. How can he really understand in an effective manner the real needs of the patient?

Nurse

There is no administrative support to encourage a culture of teamwork. Moreover, one does not find the appropriate infrastructures, such as IT networking, which for me is fundamental requisite if we are to implement a coordinated patient-approach care. In my opinion this is good practice which is of benefit to both the patient and provider’s safety.

Endocrinologist

......no coordinated approach to diabetic patient’s care and no delegated leaders either.

Nurse

Normally the doctor does not have much time to dedicate for the client. Basically, he/she only have time to review the treatment of the patient during the diabetes clinic. The doctor has to attend to other tasks, such as, see other patients in the GP clinic and attend to ‘Bereg’.

Nurse

......we are restricted on time. It is ideal to have enough time to interact with the patient and get to know him better in order to become more sensitive to his problems and develop good relationship with the patient. To deliver effective care, the doctor needs to know and understand the patient, and the patient needs to develop trust in his clinician. It is important to understand this issue and try to allocate some kind of ‘protected’ time for the patient to meet the other care providers.

Doctor

......presently due to shortage of doctors it is more seen as an added burden or extra task which we can do without.

Doctor

No teamwork setup. Goals really.

Doctor

It is not possible to have teamwork because only the podologist and the diabetes clinic
opens daily.

Chiropodist

I work on my own in the clinic. Then the doctor comes in a hurry to review the treatment of the patient.

Nurse
Question 33c:

What do you think needs to be done for teamwork to take place in the Diabetes Clinic in the Primary Health Care?

The involved personnel should come together, identify and acknowledge each other and form themselves into a team. Preferably the primary diabetic team should consist of the doctor, the nurse and the chiropodist because in my opinion they are the ones mostly involved in the care of the diabetic patient.

Chiropodist

1-ewwel irid jinholoq it-tim u jsiru laqghat biex jaraw flimkien x’inhu l-ahjar li jsir.

2 nurses

………the Primary Health Care needs to change its philosophy and foster a new culture of treatment/care for its clients. Teamwork is the ideal. The team members should have clear roles, and objectives should be clarified and quantified. Team members, especially doctors have to be allocated in the diabetes clinic according to a planned schedule and not ‘who will be available’ attitude.

Doctor + nurse

Adequate communication amongst team members

Enough time for a team to get together

Interprofessional meetings should be regular and ongoing focusing on patient-centres care

The Primary Health Care Department should provide opportunities for clinicians to learn in appropriate multidisciplinary environments and in multidisciplinary groups.

If post graduate nurses are encouraged to undergo specialization in diabetes care, I believe that the quality of care is much improved. I see this training as an incentive which not only motivates the nurses but is of great benefit to the patient too.

Continuing professional development courses for all professions

A true shared care strategy needs to be developed
In my opinion not only the diverse professions should meet to discuss the diabetic cases. Every profession involved in their care should also meet to share experiences and learn from each other.
Question 34

Comments from professional providers

More regular meetings between different professions to discuss problems we face daily and to encourage doctors understand the phrase ‘teamwork’. To encourage managers in specific professions to try and discuss issues on the work environment and to at least make a meeting if not once a month, at least once a year!!

There is a need for better understanding concerning diabetes clinic especially between SLH and health centres. Nurses who do not attend to the diabetes clinic daily need to do their utmost to pass relevant info to all staff involved.

Every now and then to hold meetings with staff of other health centres. Doctors and nurses should start the diabetes clinic at the same time. It is important to have a dietician within each centre.

I believe that teamwork, if well co-ordinated, would help in all aspects of health, thus in this comment section I strongly agree to have a teamwork of professionals in order to have a more holistic and patient centred approach.

We say we work in a team but we do not behave as such.

Diabetes Mellitus is increasing which requires various types of treatments given by different professions Teamwork is a must in a condition like this.

Most of the clients need more education on diabetes care. A nurse specialist would be more able to meet the client's needs and assess better.

Id-diabete hi kundizzjoni komuni hafna u thalli konsegwenzi koroh. Milli nara hu li n-nies li tattendt fit tati kaz jew tiehu bis-serjeta din il-kundizzjoni. Irridu nsibu metodi godda kif nghinuhom ikunu izjad konxji ta' din il-marda. Tim ta professjonisti li jahdmu flimkien jkunu jistghu jilhqu aktar dan il-ghan

To work in a diabetes clinic is interesting. We need to attend lectures on diabetes, as one whole team, work with clear cut aim in mind and meet frequently to discuss the problems.

The administration needs to believe in teamwork. The objectives have to be clarified. The task has to be clarified and quantified.

I do suugest that during the diabetic sessions if possible the same doctor will attend while on duty so that we can communicate better about patients and even he or she will know
the patient and his history

there should be protocols to show treatment regimens as much as possible

Teamwork is very important. One of the most important factors is regular meetings and discussions
Comments from the patients

Prosit. Jiena sudisfatta hafna and Is-servizz huwa tajjeb hafna

..........jiena nixtieq li l-hin tal-appuntament ma jkunx ta kulhadd fis-sebgha ta fil-ghodu.

Ser kieku wara li tarak in-ners jarak it-tabib u mhux trid toqghod tistenna ghal tul ta hafna hin
Appendix 5

Permission to access the Diabetes Clinics in the Primary Health Care
12 March 2007

Ms Maria Sciberras
12, Triq Santa Marija,
taz-Zellieqa, Gharghur NXR 07.

Re: Your Request for a Research Entitled 'Investigating Teamwork in Diabetes Care in the State Primary Health Care Setting' within Primary Health Care Dept.

Dear Ms Sciberras,

I am pleased to inform you that your request to carry out the research within the department has been fully approved. May I inform you that as we have to abide to the Data Protection Law, we cannot provide you with a list of data subjects’ contact details unless the data subjects and the researcher are both public officers. The data subjects also have to sign a consent form that also includes a data protection statement prior to participating (see E below). Any modifications of this approach would have to be first discussed with the data protection officer. Where statistics are involved, only data in terms of age, sex etc can be forwarded to you but not names of individuals.

May I bring to your attention that the researcher is obliged to apply necessary safeguards as a condition for carrying out this research, namely -

A. The personal data (of data subjects) accessed or given are only to be used for that specific purpose to conduct the research and for no other purpose;

B. At the end of the research, all personal data should be destroyed;

C. All references to personal data should be omitted in the report unless consent is specifically obtained from the person being identified in the research report;

D. Participation in the research being conducted should be at the discretion of the individual, and they can refuse any participation whatsoever if they so wish;

E. If data subjects (patients/staff) are going to be interviewed, video recorded or given a questionnaire to fill, a consent form should be signed by the participating data subject and a privacy policy statement read to them;

F. Any other measure deemed fit by the respective Head, depending on the research to be carried out.

Yours truly,

Dr Mario Vella, DPO
Data Controller

Primary Health Care Department
To: Dr. A Amato Gauci  
Director of PHCD

Dear Sir,

As already informed, I shall be making use of the Diabetes clinics at Mosta and Paola health centres, during my study and I would be very grateful if you could inform the Senior Medical Officers and Nursing Officers in the respective areas to grant me access.

Since I shall need to interview about 200 clients in all, I may need to visit the clinic quite a few times.

Your co-operation will be highly appreciated.

Yours faithfully

Ms. Maria Sciberras.
Nuring Officer

[Signature]

Dr. A. Amato Gauci  Director PHCD

Approved / Not Approved
Appendix 6

Confirmation letters from Maltese and English Translators
‘Camelia’ Flt. 3,
Mons. Luigi Catania Street
Gharghur

1st June, 2007

To Whom it concerns:

RE: Back translation of Questionnaires from Maltese to English

Dear Sir / Madam,

I hereby declare that I have personally analysed and corrected the translation into English of the two questionnaires used in this study.

Yours sincerely,

[Signature]

Stefania Pullicino
BA English & Communication Studies. PGCE English
To Whom it concerns:

**RE: Translation of Questionnaires to Maltese**

Dear Sir / Madam,

I hereby declare that I have personally analysed and corrected the translation into Maltese of the two questionnaires used in this study.

Yours sincerely,

Josef Trapani B.Sc. (Hons.), M.Sc., CQPM
Translator and Proof Reader
Appendix 7

Overall frequencies of Tuckman's team building questionnaire
<table>
<thead>
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Appendix 8

Consent form (English & Maltese)
"ANALYZING THE EFFECTIVENESS OF TEAMWORK IN THE CARE OF DIABETES WITHIN THE PRIMARY HEALTH CARE"

Consent Form

I, Mr. /Dr. /Ms. __________________________ give my consent to fill up the questionnaire in relation to the ongoing study entitled “Analyzing the Effectiveness of Teamwork in the Care of Diabetes within the Primary Health Care”, conducted by the undersigned. I understand that all answers and comments will be dealt with confidentially, and that their processing and utilization will be such as not to reveal my identity and will be destroyed after successful completion of the study. I may also ask to withdraw from completely terminating the questionnaire at any moment without any repercussions. I also consent to the researcher to access my personal file if it is necessary.

Researcher

Signature __________________________

Ms. Maria Sciberras
M. Sc. (HSM) Student

Date .......... / ........... / 2006

"ANALYZING THE EFFECTIVENESS OF TEAMWORK IN THE CARE OF DIABETES WITHIN THE PRIMARY HEALTH CARE"

Formula ta' Kunsens


Researcher

Firma __________________________

Ms. Maria Sciberras
M. Sc. (HSM) Student

Date .......... / ........... /2007

Interviewee

Firma __________________________
Appendix 9

Data Analysis of Pilot Study
GET FILE 'E:\spss team.sav'.

DATASET NAME Dataset1 WINDOW=FRONT.

COMPUTE teamclimate = mean(participation, support, objectives, taskstyle).
EXECUTE.

NPAR TESTS /K=W=teamclimate BY HealthCentre(3)
/MISSING ANALYSIS.

NPar Tests

[Dataset] E:\spss team.sav

Kruskal-Wallis Test

Ranks

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Test Statistics(a,b)

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a. Kruskal-Wallis Test
b. Grouping Variable: Health Centre

MEANS

TABLES=teamclimate BY HealthCentre
/CELLS MEAN COUNT STDDEV.

Means

[Dataset] E:\spss team.sav

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Report

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USE ALL.

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VARIABLE LABEL filter_9 'HealthCentre = 4 (FILTER)'.

VALUE LABELS filter_9 0 'Not Selected' 1 'Selected'.

FORMAT filter_9 (F1.0).

FILTER BY filter_9.
EXECUTE.

NPAR TESTS /K=W=teamclimate BY HealthCentre(3)
/MISSING ANALYSIS.
NPar Tests

[DataSet] E:\spss team.sav

Kruskal-Wallis Test

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a. Kruskal Wallis Test
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COMPUTE teamclimate = participation + support + objectives + taskstyle.
EXECUTE. 
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[DataSet] E:\spss team.sav

Kruskal-Wallis Test

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a. Kruskal Wallis Test
b. Grouping Variable: Health Centre

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TABLES=teamclimate BY HealthCentre
/CELLS MEAN COUNT STDERR .

Means

[DataSet] E:\spss team.sav

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Nonparametric Correlations

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** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

NONPAR CORR
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Nonparametric Correlations

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** Correlation is significant at the 0.01 level (2-tailed).
* Correlation is significant at the 0.05 level (2-tailed).

GET FILE='E:\spss pts.sav'.
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Means

| [DataSet2] E:\spss pta.sav |
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**NPAR TESTS**

/K-W=q6 q7 q8 q9 q10 q11 BY HC(3)

/MISSING ANALYSIS.

NPAR Tests

[Dataset2] E:\spss pts.sav

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<td>0.293</td>
<td>0.167</td>
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a. Kruskal Wallis Test
b. Grouping Variable: HC

### NPAR TESTS

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/MISSING ANALYSIS.
```

### NPar Tests

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Dataset2 E:\apss pts.sav
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### Kruskal-Wallis Test

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### Test Statistics (a, b)

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a. Kruskal Wallis Test
b. Grouping Variable: HC