

Proposal Protocol for Management of Health Needs among Patients Undergoing Intestinal Obstruction Surgery

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Abstract

Background: Intestinal obstruction surgery is a common surgical emergency due to a mechanical or functional blockage of the bowel. Obstruction frequently causes abdominal pain, nausea, vomiting, constipation and distention. **Aim:** The aim of this study was to propose a protocol for health needs management among patients undergoing intestinal obstruction surgery. **Design:** A descriptive exploratory design was utilized in carrying out this study. **Setting:** The study was conducted at surgical departments and outpatients' clinics at El Demerdash surgical hospital. **Subjects:** A Purposive sample (90) adult patients undergoing intestinal obstruction surgery. **Tools:** Two tools were used for data collection were: **I-** Patients' interviewing questionnaire it was includes socio-demographic characteristics and medical data sheet. **II-** health needs assessment questionnaire to assess (physical, psychological, social, educational and spiritual needs). **Results:** the result of the study showed that less than half of the studied patients had moderate level related to total physical needs, less than two thirds of them had moderate level related to total psychological needs and slightly less than three quarters of them had moderate level related to total social needs. Moreover, slightly less than two thirds of the studied patients had low level related to total educational needs. While, slightly more than half of them had moderate level related to total spiritual needs. **Conclusion:** The highest needs were social needs followed by psychological, educational, spiritual and then later physical needs. There were highly statistically significant positive correlations between total physical, psychological, social, educational and spiritual needs of the studied patients undergoing intestinal obstruction surgery. **Recommendation:** Continuous assessment of the needs of the patients undergoing intestinal obstruction surgery is highly recommended.

Keywords: Health needs management, Intestinal obstruction surgery, Propose a protocol

Introduction:

Bowel obstruction also known as intestinal obstruction is a mechanical or functional obstruction of the small or large intestines. Obstruction frequently causes abdominal pain, nausea, vomiting, constipation-to-obstipation, and distention. This, in turn, prevents the normal movement of digested products.

Small bowel obstructions (SBOs) are more common than large bowel obstructions (LBOs) and are the most frequent indication for surgery on the small intestines (Nathens, et al., 2018).

Bowel obstructions are classified as a partial, complete, or closed loop. A closed-loop obstruction refers to a type of obstruction in the small or large bowel in which there is complete obstruction

distally and proximally in the given segment of the intestine (**Behman, et al., 2018**).

Needs assessments are required to guide care planning in part because many patients do not communicate concern their clinicians. In addition, it provides a rich opportunity to more fully understand experiences of the patients. Moreover, careful assessment of patients' needs is central to the whole process of providing care. It's important that the patient undergoing intestinal surgery needs to be assessed the health to improve both the quality and value of care provided (**Gdor et al., 2014**).

Significance of the study

Intestinal obstruction is a serious medical emergency need rapid intervention. Management options include medical therapy, surgical therapy, endoscopic therapy and interventional. There is a higher incidence with age and number of intra-abdominal procedures (**Wessels et al., 2019**). The prevalence of bowel obstruction is approximately 100 - 500 per 100,000. 5% in patients who have not undergone previous abdominal surgery. There is a similar incidence of males and females (**Smith et al., 2020**).

In Egypt, Acute intestinal obstruction remains a major clinical presentation of Egyptian patients in Upper Egypt. Incidence is 186 patients presented with acute intestinal obstruction during the period from January 2009 to December 2017 (**Badary et al., 2018**).

Intestinal obstruction surgery affects quality of life (QoL) of patients and families it implies significant changes physically, psychologically and socially.

Patients have to adjust to managing ostomy self-care and appliances and to deal with new body image. Because of anxiety related to accidents and issues with stool leakage, odors and gas, many of them limit activities as they are worried about embarrassing situations in public. They commonly feel their bodies out of control and report that pouches wearing have negative psychological impact. Effective pre/post-operative assessment of patients' needs is fundamental to provide the safe surgical procedures (**Hubbard et al., 2017**). Therefore, assessment health needs and developing a protocol is important to improve both the quality and value of care for patients undergoing intestinal obstruction surgery.

Aim of the Study

The study aims to develop a proposed protocol for health needs management among patients undergoing intestinal obstruction surgery. This aim was achieved through the following:

1. Assessing the health needs of patients undergoing intestinal obstruction surgery (physical, psychological, social, educational and spiritual needs).
2. Proposing a protocol for health needs management among studied patients.

Research Questions

1. What are the health needs of patients undergoing intestinal obstruction surgery?
2. What possible protocol can be proposed for health needs management?

Subjects and Methods:

I. Technical Design:

It included research design, study settings, subject and tools of data collection.

Research Design:

A descriptive exploratory research design was utilized to conduct this study.

Study Settings:

The study conducted in the Surgical Departments and Outpatients' Clinics at El Demerdash Surgical Hospital, affiliated to Ain Shams University.

Subjects:

A Purposive sample of (90) adult patients from both genders undergoing intestinal obstruction surgery with no other co-morbidities (e.g. Renal failure, Cerebrovascular stroke etc.). Agree to participate in the study.

According to the power analysis were used coherent test using Epicalac 2000 software. **(Population size:180-expected frequency=50%-acceptable error=10%-confidence Coefficient=99%-minimum sample size =86).**

Tools of the study:

I. Patients interviewing questionnaire.

It was developed by the researcher in an Arabic language based on the review of the relevant recent related literatures. **Haris & Kristianti (2020), Ozturk et al., (2018) ; Kabbash et al., (2019) ; Soressa et al., (2016); Rice et**

al., (2016); Tobeek, (2016) and Hinkle & Cheever,(2014). It was included two parts:

Part (1): Socio-Demographic data to assess patient's characteristics regarding age, gender marital status, level of education, job and residence.

Part (2): Medical data to assess present clinical picture present and past history and medical management of the patient undergoing intestinal obstruction surgery as duration of complaining abdominal pain, symptoms of intestinal obstruction, presence of medical disease rather than intestinal obstruction, previous surgery and number of family with intestinal obstruction.

Tool II: Patients' health needs assessment:

It was written in simple Arabic language to assess physical, psychological, social, educational and spiritual needs for patients undergoing intestinal obstruction surgery. It included fifth parts as following:

Part (1): Assess Patients' physical needs: It was composed of 8 items which included resuming physical activities, receiving nutrition by intravenous infusion, depending on movement, need help in Maintain Hygienic measures, feeling of fatigue, insufficient sleeping hour, difficulty in defecation and difficulty in urination. It was guided by **Williams & Dewitt (2014); Colloin et al., (1988) and Katz et al., (1983).**

❖ Scoring system:

Each item scored with three point likert scale, including always, sometimes and never, arranged from 2, 1 and 0 respectively, maximum score was 16 score and minimum was 0, high score means high needs. **Summation score of each item and categorized patients depended on three categories ranged as following:**

High physical needs	11-16
Moderate physical needs	8-10
Low physical needs	0-7

Numerical Pain Rating Scale:

It was used to assess level of pain for patients undergoing intestinal obstruction surgery, which a respondent selected a whole number (0-10) as '0' representing to no pain and '10' representing to severe pain, it was translated into Arabic language by the investigator, It was adopted from **Galer & Gammaitoni, (2003)**.

❖ Scoring system:

The pain scale included 5 items:

- Zero= no pain
- (1-3)= mild pain
- (4-6)= moderate pain
- (7-10)=severe pain

Part (2): Assess of Patients' psychological needs: it composed of 6 items which included feeling of anxiety, fear of complication from surgery, tended to over-react to situations, difficulty to cope with health conditions, thinking too much about the future, fear of lack of support and loneliness. It was guided by **Snaith & Zigmond, (1994)**.

❖ Scoring system:

Each item scored as Likert scale; including always, sometimes and never, ranged from 2, 1, 0 respectively, maximum score was 12 score and minimum was 0

Summation score of each domain and categorized patients depended on three categories as the following:

High psychological needs	9-12
Moderate psychological needs	6-8
Low psychological needs	0-5

Part (3): Assess of Patients' Social needs: It was composed of 6 items, effect of disease on participation in community activities, Effect of disease on work performance, sexual activity changes, Needs to participate in leisure time activities, dependent on others and financial burden, it was adapted from social dysfunction rating scale (**Linn et al., 1969**).

❖ Scoring system:

Each item scored with three point Likert scale including always, sometimes and never, ranged from 2, 1 and 0 respectively, maximum scores was 12 score and minimum was 0, high score mean high needs. **Summation score of each item and categorized patients depended on three categories ranged as following:**

High social needs	9-12
Moderate social needs	6-8
Low social needs	0-5

Part (4): Assess Patients' educational needs: it used to assess level of knowledge for patients undergoing

intestinal obstruction surgery. It consisted of 14 questions (closed end questions). It included nature of the disease (definition, risk factor, symptoms, causes and management) Perioperative care, stoma care, life style change and follow up care it was guided by **Haris & Kristianti, (2020) and Tobeek, (2016)**.

❖ Scoring system:

Each item scored yes= 1 and No =zero, maximum scores was 14 and minimum was 0, high score mean to high needs. **Summation score of each item and categorized patients depended on three categories ranged as following:**

High educational needs	10-14
Moderate educational needs	7-13
Low educational needs	0-6

Part (5): Assess Patients' spiritual needs: It was composed of 5 items, which included assured that the life was meaningful and of value, find meaning in illness and/or suffering, spiritual practices, Positive vision for the future, and Sense of inner peace. It was guided by **Rosdahl & Kowalski, (2016); and Adugbire, & Aziato, (2020)**.

❖ Scoring system:

Each item scored with three point Likert scale ranged from always, sometimes and never, ranged from 0, 1 and 2 respectively, maximum scores was 10 score and minimum was 0, high score mean to high needs. **Summation score of each item and categorized patients depended on three categories ranged as following:**

High spiritual needs	8-10
Moderate spiritual needs	5-7
Low spiritual needs	0-4

Reliability:

Proposed tools were done by Alpha Cronbach test (0.863) for the total items. It was used to examine whether the questionnaire had internal consistency. Alpha- Cronbach test for each of the needs was the following:

- Physical needs =0.803.
- Psychological needs = 0.722.
- Social needs =0.601.
- Spiritual needs = 0.596.
- Educational needs = 0.867.

The tools had a good internal consistency indicating acceptable reliability.

II. Operational Designed:

It included the preparatory phase, tool validity and reliability, pilot study, ethical consideration and field work.

Preparatory phase:

It included reviewing of related literature and theoretical knowledge of various aspects of the study using books, articles, internet, periodicals and magazines to develop the study tools for data collection.

Ethical Considerations

An approval was obtained from the study subjects individually and scientific ethical committee of Ain Shams University using a written informed consent obtained from each participant prior to data collection. They were assured that anonymity and confidentiality would be guaranteed and the right to withdraw from the study at any time. Ethics, values, culture and beliefs would respected.

(III) Administrative design

An official permission was obtained from director of El- Demerdash surgical Hospital, affiliated to Ain Shams University in which the study was done conducted to obtain the approval and assistance in conducting the study.

Pilot Study:

A Pilot study was carried out on 10% of the sample under study to test the applicability and clarity and efficiency of the tools, then the tools modified according to the results of pilot study.

Fieldwork: It was included the following:

- Data were collected in six months from November 2019 to April 2020.
- Purpose of the study was simply explained to the patients who agreed to participate in the study prior to any data collection.
- The researcher started to collect data from patients before the surgery.
- Data were collected by the researcher 3 days weekly (Sunday, Tuesday and Thursday) during morning and afternoon shifts. The time consumed to fill out the questionnaire sheet ranged from 20-30minutes, so the collection of the data for the studied group ranged from 2-3 patients daily.
- Patient's medical records used to obtain the past and present medical history, treatment...etc.

- The researcher started to collect the data from the studied patients on the day before the surgical technique at surgical department in Demerdash Hospital
- Proposed a protocol was developed by researcher based on health needs of the studied patients.
- The content was written in simple Arabic language and consistent with the related literature. Moreover, it met patient's health needs and level of understanding.
- The proposed protocol for management physical, psychological, social, educational and spiritual needs

IV. Statistical Analysis:

The collected data were organized, categorized, tabulated and Data were analyzed using Statistical Program for Social Science (SPSS) version 20.0 Quantitive data were expressed as mean± standard deviation (SD). Qualitative data were expressed as frequency and percentage.

The Following tests were done

Chi-square(χ^2) test of significance was used in order to compare proportions between two qualitative parameters.

Probability (p-value):

P-value ≤ 0.05 was considered significant.

P-value ≤ 0.001 was considered as highly significant.

P-value > 0.05 was considered insignificant

Results:

Table (1): revealed that, 35.6 % of the studied patient's age were between 35-50years, 62.2% of them were males and

55.6% of them were married, while 34.4% of them had secondary education, 55.6% of them were working and 58.9% of them were from urban areas.

Table (2): revealed that, 100% of the studied patients had difficult in defecation, respectively and 71.1% of them sometimes had insufficient sleeping hour. While, 100% of them never had difficult in urination.

Table (3): illustrated that 85.6% of the studied patients always had difficult to cope with health conditions, and 66.7% of them sometimes fear of lack of support and loneliness. While 42.2% of them never tended to over-react to situations.

Table (4): revealed that 55.6% & 52.2% of the studied patients disease always effect on Participation in community activities and financial burden, and 83.3% of them sometimes effect of

disease on work performance. While 66.7% of them never dependent on others.

Table (5): revealed that, 100%, 70% of the studied patients know signs and symptoms of intestinal obstruction and causes of the intestinal obstruction. While 95.6% of them did not know most common disease of gastro intestinal tract.

Table (6): illustrated that 81.1% & 47.8% of the studied patients always done spiritual practices and sense of inner peace, respectively and 77.8% of them sometimes positive vision for the future. While 36.7% & 35.6% of them never assured that the life was meaningful and of value and find meaning in illness and/or suffering, respectively.

Table (7): illustrated that, there was highly statistically positive correlation between total physical needs of the studied patients and their total psychological needs, social needs, educational needs and spiritual needs.

Table (1): Number and percentage distribution of the studied patients according to their demographic characteristics (n=90).

Characteristics of the studied Patients	Number	Frequency
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Age		
20 - <35	31	34.4
35 - < 50	32	35.6
50 +	27	30.0
mean \pm SD	1.95 \pm 0.80	
Gender		
Male	56	62.2
Female	34	37.8
Marital status		
Married	50	55.6
Not married	40	44.4
Level of education		
No education	21	23.4
Basic	19	21.1
Secondary	31	34.4
Bachelor	19	21.1
Job		
Working	50	55.6
Not working	40	44.4
Place of residence		
Urban	53	58.9
Rural	37	41.1

Table (2): Number and percentage distribution of the studied patients regarding to their physical needs assessment (no= 90).

Items	Always		Sometimes		Never	
	No	%	No	%	No	%
Resume physical activities dependently	53	58.9	28	31.1	9	10.0
Receives nutrition by intravenous infusion	67	74.4	23	25.6	0	0.0
Depending on other when move from one place to another place	76	84.4	7	7.8	7	7.8
Need help in maintain hygienic measures	8	8.9	15	16.7	67	74.4
Feeling of fatigue	36	40.0	31	34.4	23	25.6
Insufficient sleeping hour	19	21.1	64	71.1	7	7.8
Difficult in defecation	90	100.0	0	0.0	0	0.0
Difficult in urination	0	0.0	0	0.0	90	100.0

Table (3): Number and percentage distribution of the studied patients regarding to their psychological needs (no= 90).

Items	Always		Sometimes		Never	
	No	%	No	%	No	%

Feeling of anxiety	41	45.6	34	37.8	15	16.7
Fear of complication from surgery	10	11.1	53	58.9	27	30.0
Tended to over-react to situations	19	21.1	33	36.7	38	42.2
Difficult to cope with health conditions	77	85.6	11	12.2	2	2.2
Thinking too much about the future	22	24.4	52	57.8	16	17.8
Fear of lack of support and loneliness	12	13.3	60	66.7	18	20.0

Table (4): Number and percentage distribution of the studied patients' regarding to their social needs (no= 90).

Items	Always		Sometimes		Never	
	No	%	No	%	No	%
Effect of disease on Participation in community activities	50	55.6	40	44.4	0	0.0
Effect of disease on work performance	15	16.7	75	83.3	0	0.0
Sexual activity changes	17	18.9	56	62.2	17	18.9
Needs to participate in leisure time activities	8	8.9	33	36.7	49	54.4
Dependent on others	6	6.7	24	26.7	60	66.7
Financial burden	47	52.2	30	33.3	13	14.4

Table (5): Number and percentage distribution of the studied patients regarding to their educational needs (No= 90).

Items	Yes		No	
	No	%	No	%
Definition of gastro Intestinal tract	58	64.4	32	35.6
Most common disease of gastro intestinal tract	4	4.4	86	95.6
Signs and symptoms of intestinal obstruction	90	100.0	0	0.0
Medical and surgical management of intestinal obstruction.	58	64.4	32	35.6
Causes of the intestinal obstruction	63	70.0	27	30.0
Dealing of pain post-operative by using relieving measure techniques	40	44.4	50	55.6
Peri operative care	50	55.6	40	44.4
Self – care and hygiene	77	85.6	13	14.4
Stoma care in hospital	8	8.9	82	91.1
Stoma care at home	25	27.8	65	72.2
Signs of surgical site infection	13	14.4	77	85.6
Follow up care	25	27.8	65	72.2
Information about appropriate food in case of colostomy	10	11.1	80	88.9
Life style change with stoma	11	12.2	79	87.8

Table (6): Number and percentage distribution of the studied patients regarding to their spiritual needs (no= 90).

Items	Always		Sometimes		Never	
	No	%	No	%	No	%

Assured that the life was meaningful and of value	21	23.3	36	40.0	33	36.7
Find meaning in illness and/or suffering	29	32.2	29	32.2	32	35.6
Spiritual practices	73	81.1	17	18.9	0	0.0
Positive vision for the future	0	0.0	70	77.8	20	22.2
Sense of inner peace	43	47.8	27	30.0	20	22.2

Table (7): Relation between socio-demographic characteristics of the studied patients and their total physical needs regarding intestinal obstruction surgery (n=90).

Total needs	Physical needs		Psychological Needs		Social Needs		Educational Needs		Spiritual	
	R	p	R	P	R	p	R	P	R	P
1- Total Physical Needs	_____		426	.008**	.671	.003**	.712	.001**	.514	.006**
2- Total Psychological Needs	426	.008**	_____		.489	.008**	.327	.011*	.543	.005**
3- Total Social Needs	.671	.003**	489	.008**	_____		.273	.021*	.580	.000**
4- Total Educational Needs	.712	.001**	.327	.011*	.273	.021*	_____		.255	.029*

(**) Statistically significant at $p < 0.01$

_ it reflect the same needs

Discussion:

The current study was a descriptive exploratory study and aimed to develop proposed a protocol for health needs management among patients undergoing intestinal obstruction surgery. This aim achieved through assessing the health needs of patients undergoing intestinal obstruction surgery (physical, psychological, social, educational and spiritual needs), and proposing a protocol for health needs management among studied patients

Concerning the demographic characteristics of patients undergoing intestinal obstruction surgery; the present study showed that slightly less than two

thirds were males, more than half of the sample were married. As well as more than more than one third of them were secondary education. This may be due low level of schooling and need for more education about their condition as lack of information was the risk factor for this disease, lack of prevention of intestinal obstruction due to lack of information on the risk factors for this disease also being married was associated with a sense of responsibility, greater acceptance of disease, reduce stress and need family involvement especially of the spouse in the recovery of the patients.

These finding were in agreement with study conducted by **Soressa et al., (2016)**, who revealed that more than three quarters of the study participants were

married males, from rural areas and farmers. In the same context study carried out by **Rice et al., (2016)**, who stated that more than two third of patient were married with low education level. In the same context a study carried out by **Akrami et al., (2015)**, who stated that less than two thirds of the study participants' male to female ratio 1.5: 1. Also, these findings were matched with **Gautam et al., (2016)**, who clarified that, more than three quarter were males. Moreover, **Tobeek, (2016)**, who clarified that, more than half of them were male but unmarried.

Meanwhile, the current study finding was contradicted with **Neri, (2016)**, who mentioned that, half of patients were males and half were females. In the same context, this was in congruent with **Wang et al., (2015)**, who confirmed that, more than two third of patients were university graduate females. Other finding by **Kabbash et al., (2019)**, who concluded that, most of study participants were females with male to female ratio 1:1.5. Also, research was in consistent with the study findings a study conducted by **Mohamed et al., (2012)**, who argued that, less than one third of patient had university level of education.

In addition, the present study finding showed that more than one third of studied patient at age group between 35-50 years old; more than half of them employed. This may be due to studied patients were middle age and less experienced to cope with disease and live with the symptoms compared to younger adults and elder age, also being employed was associated with a sense of responsibility, consequences of their disease as patients need to fulfill employment responsibilities.

This result was supported by **Ozturk et al., (2018)**, who mentioned that less than half of patients were young and had an incorrect initial diagnosis. In the same context a study conducted by **Soressa et al., (2016)**, who mentioned that two third of patients were less fifty years. Moreover, These findings were agreed with **Akrami et al., (2015)**, who mentioned that, age of the patients was between 15 to 85year. In the same context a study carried out by **Jiang et al., (2019)**, who indicated that age of the study participants ranged from 25 – 55 years. Also, the current study finding was matched with **Haris & Kristianti, (2020)**, who agreed upon, less than half of patients were secondary high school. Moreover, **Gautam et al., (2016); Tobeek, (2016)**, who claimed that, more than half of patient were Employed. Meanwhile, inconsistent with study conducted by **Jeppesen et al., (2016)**, who stated that, high age had been shown to be risk factors for small intestine obstruction. Also, study carried out by **Reginelli et al., (2014)**, who mentioned that, intestine obstruction was commonly found in the elderly population. Moreover, the current finding was contradicted with study conducted by **Ozturk et al., (2018)**, who stated that, intestinal obstruction was one of the most frequent emergencies in general surgery, commonly affecting elderly patients above sixty years. Morbidity and mortality in elderly was high.

Regarding physical needs of the studied patients, the current study clarified that all studied patients had difficulty in defecation, but never had difficulty in urination, while less than three quarters of them sometimes had insufficient sleeping hour.

This study finding was supported by **Pinto et al., (2016)**, who reported that, there were significant adverse effects of intestinal surgery both on the physical and the mental

health components. Also, this study finding was consistent with study carried out by **Rice et al., (2016)**, who stated that, all subjects had moderate physical needs underwent a comprehensive physical care.

In the same context a studies conducted by **Springer et al., (2014); Team, (2016); Scott et al., (2016)**, who clarified that, small intestinal obstruction seriously moderately impaired quality of life and physical functioning, with insufficient sleeping hour.

Also, in the line of a study findings study conducted by **Li et al., (2012); Gautam et al., (2016)**, who mentioned that, majority of patients had moderate physical needs with difficulties in defecation, sleeping, bathing, and enjoying foods and drinks as much as before the surgery.

However, this study result was contradicted with studies conducted by **Rice et al., (2016); Bland and Young, (2015)**, and agreed upon majority of patients had high physical need. Moreover, in contrary with the study finding a study conducted by **Mols et al., (2014)**, who found that, that intestinal obstruction affects patients' life in many aspects so their physical needs were high.

Also, present findings were in disagreement with studies carried out by **Hardt et al., (2013); Vonk-Klaassen et al., (2016)**, who reported that, half of studied patients had poor level of physical activities and changes in lifestyle

Regarding the psychological needs of the studied patients, majority of the studied patients always had difficult to cope with health conditions, more than two thirds of them sometimes fear of lack of support and loneliness, also less than half had anxiety, while less than half of them never tended to over-react to situations.

This may be due to intestinal obstruction surgery may affect patients psychologically due to challenges such as prolonged recovery or long-lasting disability. Psychological distress could further delay patients' recovery as stress delays wound healing and compromises immunity. Also feeling of guilt resulting from the impact of operation on their family and worry about "being a burden" and loss of ability for passing stool normally, in addition, the presence of physical problems and pain, isolation from others, and fear of death.

The study finding was supported by **Nightingale et al., (2020)**, who mentioned that, patients had moderate level related to total psychological need and had history of depression, somatization, poor coping, lack of support, low interaction with family, careers and job leading to low self-esteem/confidence/mood. Also, this study findings was agreed with **Joseph et al., (2016)**, who confirmed that, limited physiological reserves and frailty contributed to worse outcomes in the elderly patients had moderate needs in terms of functional decline, more complications and prolonged stay in hospital, regardless of treatment, fear of loneliness.

In the same context a study carried out by **Pinto et al., (2016)**, who confirmed that, findings reported patients had moderate level of psychological needs, anxiety patients were less motivated to follow the medical recommendation, also of adverse effects of intestinal obstruction surgery on half of patients psychosocial outcomes. Moreover, the study findings was agreed with **Gautam et al., (2016)**, who clarified that patients had moderate psychological needs, anxious preoccupation, anger and difficult to cope with health conditions.

On the other hand, the present study findings was in congruent with **Pojoga & Stanculete, (2014)**, who mentioned that, patients represented individual coping mechanisms by the primary and secondary appraisal and by the coping style (problem-focused, emotion-focused or avoidance). Both problem-focused and emotion-focuses coping styles had advantages. Also, in contrary with the current study findings a study conducted by **Rahman et al., (2020)**, who revealed that, studied patients had low level psychological need as the health efforts provided must include the client's cope with their health conditions. Also, the present study finding was in congruent with **Cheng et al., (2013)** who indicated a high level of psychological needs. This result was also in contrary with **Ayaz-Alkaya, (2019)**, who explained that, patients psychological needs were low, they accepted their body, including the changes associated with it and felt that Allah has given them a new life, Also, the present result was in congruent with **Tobeek, (2016)**, who stated that studied patients had high psychological needs. These psychological needs were found in: coping with their conditions, body image, and anxiety. In addition, the study results were inconsistent with **The Joint Commission, (2017)**, who mentioned that, studied patients were low needs for psychological care contributed to reduce anxiety regarding the experience, enhance ability to cope with the preoperative experience and recovery, and could decrease the risk for complications.

Regarding social needs of the studied patients, the findings of the present study clarified that, more than half of studied patients disease always effect on participation in community activities and financial burden, this may be due to the nature of surgery and various psychological, emotional, physical issues complicate the

coping of the disease for patients, thus, lengthen the adaptation period, an important effect of social support on the disease evolution influencing recovery from the illness

The study findings were supported by **Pojoga & Stanculete, (2014)**, who displayed that, there was moderate level of social needs, and the majority of the patients had depression or anxiety, all social needs and quality of life of the patients impaired, lead to occupational disability and affect their social relationships. Also, the current study result matched with **Moller et al., (2012)**, who mentioned that, patients who experience surgical complications report moderate to worse levels social needs in different aspects of social activities and quality life support.

Moreover, the study findings was supported by **Gautam et al., (2016)**, who mentioned that, patients showed moderate level in social needs, impairment of social activities engagement, and lack of acceptance. Also, study findings were supported by **Tobeek, (2016)**, who reported that, the studied patients had moderate social needs, these social needs were found in: financial burden, sufficient insurance coverage and social relation.

On the other hand, the current findings was contradiction with a study about "overview of psychosocial problems in individuals with stoma" that conducted by **Ayaz-Alkaya, (2019)**, who found that, patients' social needs were high that effect community activities, sexuality and social life activities. Moreover, the present study findings was in congruent with study conducted by **Cheng et al., (2013)**, who indicated that patients had a high level of social needs, failed to accept, experienced poor interpersonal relationships and were less likely to report improvements in

adjustment. Also, in contrary with the current study findings a study conducted by **Li et al., (2012)**, who confirmed that, less than half of patients had high level of social needs that had a negative impact on their sex life.

Regarding Educational Needs of the Studied Patients, the current study findings clarified that slightly less than two thirds of studied patients had low level related to total educational need, also all studied patients know signs and symptoms of intestinal obstruction, while majority of them didn't know the most common disease of gastro intestinal tract. This study findings was relevant and consistent with **Soressa et al., (2016)**, who suggested that, the studied patients had low level of educational needs and health professionals in the hospital and district increased public awareness on of intestinal obstruction causes, signs and symptoms by providing appropriate health information. In the same context a study conducted by **Haris et al, (2020)**, who confirmed that studied patients had low level educational need also clear and precise intervention in education at the time of admission to the hospital led to a higher acceptance of the treatment.

Moreover, the current study result matched with **The Joint Commission (2017)**, who found that, studied patients had low level of educational needs about abdominal surgery. Also, the study findings were supported by **Tobeek, (2016)**, who confirmed that, studied patients with low educational needs. The highest educational needs were found in: Discharge instructions, emergent signs and symptoms.

Also, in the same context a study conducted by **Yılmaz & Özkan, (2015)**, who mentioned that, proper training program about signs and symptoms of intestinal obstruction and medication played

an important role in helping patients in recovery. Moreover, present findings were agreed with **Tan et al., (2013)**, who showed that, it was important that information meets the needs of surgical patients and was given in accordance with their individual coping style, majority of patients received information about wound care, stated that the wound care information was sufficient.

However, the current finding was contradiction with a study about clinical characteristics of bowel obstruction in Southern Iran; that conducted by **Akrami et al., (2015)**, who found that, studied patients had high educational needs with lack of information about the accuracy of signs, symptoms, and major causes intestinal obstruction. Also, in contrary with the current study findings a study conducted by **Engelke & Woten, (2017)**, who revealed that, studied patients had high strongly needs for education and teaching the patients about his/her specific abdominal surgery, the risks and benefits of abdominal surgery the initial inpatient recovery period.

In addition, study conducted by **Gautam et al., (2016)**, was incongruent with the current study findings and stated that, patients had high educational need, less information and education about gastro intestinal tract disease, acceptance of disease, and how adjusts to the changes in their day-to-day life. Furthermore, the current study result contradicted with **Cheng et al., (2013)**, who stated that, majority of studied patients had high educational needs with unsatisfactory knowledge.

Moreover, the findings of the present studies was in contrary with **Iqbal et al., (2016); Akgül and Karadağ, (2016)**, who found that one of the groups most affected by the intestinal obstruction did not know signs and symptoms of intestinal

obstruction. Also, result of current study was contradicted with study carried out by **Sendir et al., (2013)**, who confirmed that, subjects identified a high needs for information in specific areas in order to manage their care as medications, enhancing quality of life, signs of wound infection improved because it is the most common postoperative complication.

Regarding spiritual needs of the studied patients, the current study showed that slightly more than half of studied patients had moderate level related to total spiritual needs; majority of studied patients always had spiritual practices and sense of inner peace. This may be due to religious believes that made patients accept their disease also the quality of life patients was conditioned not only in physical but also in Spiritual terms as intestinal surgery brings many changes into patients life and it is important to provide systematic Spiritual support, patients therefore sought spiritual protection from harm during surgery. Thus, religiosity should be integrated into the care of surgical patients.

This was relevant and consistent with study conducted by **Adugbire & Aziato, (2020)**, who studied surgical patients' perception of spirituality on the outcome of surgery in Northern Ghana and found that, Muslim surgical patients had moderate level spiritual needs and believed in Allah and prayed to Allah before, during, and after operation. The patients perceived that through these spiritual practices they had successful surgical outcomes. Moreover, the studies were conducted with **Melhem et al., (2016)**; **Harrad et al., (2019)**; **Cosentino et al., (2020)**, who stated that, more than two thirds of patients were moderate strongly needed for meaning of life and hope” and “caring and respect.

Furthermore, study finding was relevant and consistent with study carried out by **Ayik et al., (2019)**, who studied relationships among spiritual well-being, adjustment, and quality of life in patients with a stoma in Turkey and found that, patients' spiritual needs were moderate; spirituality was a crucial factor in improving the quality of life of the patients with intestinal obstruction.

Also, this agreed with studies carried out by **Gore, (2013)**; **Rogers & Wattis, (2015)**, **Dahshan & Diab, (2015)**, who showed that nurses improved patients' spiritual well-being by providing spiritual support that helped them to find inner peace, find meaning and hope during hospitalization and had high peaceful practices. Moreover, studies conducted by **Dixon et al., (2015)**; **Chen, et al., (2018)**, who reported that, patients spiritual needs were moderate especially who undergoing surgery for the first time were often unsure of their safety and felt worried.

In the same line, present result was matched with **Selby et al., (2016)**, who found that, patients had moderate level spiritual need and effective holistic nursing care that adequately incorporated spirituality requires effective educational system, supportive professional environment, and motivation. In addition, **Kahissay et al., (2017)**, who revealed that, patients believed that pray (Spiritual practices) and perform what was expected to prevent such illnesses or in the case of surgery to undergo a successful surgery.

In the same line, study finding was consistent with study carried out by **Hunsberger et al., (2014)**, who reported that, in the Muslim community, patients had low to moderate spiritual care as faith and Spiritual practices were used as a coping mechanism during the perioperative

period. Patients were always happy and felt loved, increased their hope for the future, decreased their anxiety, enhanced surgical outcome and improved pain management.

Besides, this result was supported by a study conducted by **Aziato & Adejumo (2015)**, who assessed the psychological factors associated with pain and indicated that family members recognize the moderate needs for spirituality; thus, they prayed for their relatives to go through surgery and recover successfully. Moreover, the study finding was matched with **Dixon et al., (2015)**, who revealed that patients had moderate spirituality that heightened when the individual has feelings of threat and harm.

While, in contrary with the current study findings a study conducted by **Puchalski et al., (2014)**, which showed that there was high needs for spiritual practices as few of patients expressed through beliefs, values, traditions, and practices. Also, the present study findings were in congruent with **Rumun, (2014)**, who reported that the sick patients believed that the sickness is a punishment from God had low spirituality. Also, the study result was inconsistent with studies conducted by **Klebanoff & Hess, (2013)**; **Elk et al., (2019)**, who concluded that there was low level of physical, psychological, social, and spiritual care, which effected good health and well-being of patients.

Also, the study result was in contrary with study carried out by **Black, (2013)**; **Aziato & Adejumo, (2015)**, who concluded that patients had high spiritual needs and that made patients' relatives prayed for them to have successful surgical experience. In addition, study conducted by **Balboni et al., (2014)**, who found that patients had high spiritual needs and health care professionals, especially nurses, were

often uncomfortable with the provision of spiritual care because of lack of private space, inadequate skills/ training to provide spiritual care.

Furthermore, the study result was in congruent with **O'Brien et al., (2019)**, who revealed that patients had unmet high spiritual needs were at increased risk of further preliminary psychiatric effects, lower quality of life, and diminished spiritual harmony. Moreover, **Tobeek, (2016)**; **Haris et al., (2020)**, who revealed that the studied patients had low spiritual needs. The highest spiritual needs were represented in: coping with praying or fasting and positive vision for the future.

In addition, another interesting result was that the highly positive correlations between total physical needs of the studied patients and their total psychological needs, social needs, educational needs and spiritual needs, this study result was consistent with studies conducted by **Ayik et al., (2019)**, who emphasized on highly positive correlations between physical, psychological, social, spiritual and educational needs. Also, the study findings agreed with **Chen et al., (2018)**, who found that highly positive correlations between psychological and spiritual needs as life review and spiritual care reduced depressive symptoms, improve quality of life and increase self-esteem in life-threatening diseases.

Furthermore, the present results were matched with studies conducted by **Mohamed et al., (2012)**; **Tobeek, (2016)**, who concluded that there were statistically significant relations between patients' needs. In addition, the present study findings were supported by **Bovero et al., (2016)**, who concluded that highly positive correlations were found between psychological and spiritual needs. Moreover, **Sica, &**

Stebbing, (2016), who concluded that there was relation physical functioning and educational needs.

Meanwhile, the study findings was in congruent with study conducted by **Li et al., (2012)**, who displayed that there were highly positive correlations between physical, psychological, social, and spiritual but there was no relation with educational needs. Moreover, this finding was also in contrary with **Cheng et al., (2013)**, who explained that a significance correlation was found between patients' social, educational and physical needs. While, there was no relation with spiritual needs. In addition, the findings was also in congruent with **Maculotti et al., (2019)**, who demonstrated that, no relation was found between educational needs and physical activity for studied patients.

Conclusion:

The results of this study concluded that:

Regarding the health needs of patients undergoing intestinal obstruction surgery; less than half of the studied patients had moderate level related to total physical needs, less than two thirds of them had moderate level related to total psychological needs and slightly less than three quarters of them had moderate level related to total social needs. Moreover, slightly less than two thirds of the studied patients had low level related to total educational needs. While, slightly more than half of them had moderate level related to total spiritual needs. In addition, highly statistically significant positive correlations between total physical, psychological, social, educational and spiritual needs of patients undergoing intestinal obstruction surgery.

Recommendations:

Based on the current study findings, the following recommendations are suggested:

In services:

An orientation program should prepared for patients undergoing intestinal obstruction surgery.

Continuous assessment of the needs of the patient undergoing intestinal obstruction surgery is highly recommended.

In research:

Further research studies are needed to focus on assessment of the quality of life of such group of patients undergoing intestinal obstruction surgery.

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