PEER REVIEW HISTORY

ARTICLE DETAILS

TITLE (PROVISIONAL)	Health conditions of migrants, refugees and asylum seekers on search and rescue vessels on the central Mediterranean Sea, 2016-2019: a retrospective analysis.
AUTHORS	van Boetzelaer, Elburg; Fotso, Adolphe; Angelova, Ilina; Huisman, Geke; Thorson, Trygve; Hadj-Sahraoui, Hassiba; Kremer, Ronald; Kuehne, Anna

VERSION 1 – REVIEW

REVIEWER	Theodosopoulou, Polyxeni National and Kapodistrian University of Athens, Anesthesiology
REVIEW RETURNED	06-Aug-2021

GENERAL COMMENTS	A very well-analyzed research on patient conditions onboard rescue vessels. Further papers regarding treatment and health conditions onboard are needed, as the majority of the literature describes refugee and asylum seeker's conditions on land-bound services. I would add a paragraph explaining the organisation of the outpatient clinic onboard the MSF's SAR vessels including description of equipment, personnel involved as well as triage procedure. I have not quite understood what you mean by the term "non-violence related injury", so could you add a simple sentence either describing the type of injury you are referring too or by giving an example? I would be interested on a comment concerning the severe delays often encountered when it comes to receiving an assignement towards a safe place for disembarkation. How is the outpatient clinic's routine adjusted when delays accompanied with overcrowding occur? All in all I find your article very enlightening. Such efforts to describe one of the most serious tragedies occuring in the Mediterranean Sea are needed in the literature.

REVIEWER	Sodemann, Morten Odense Universitetshospital, Migrant Health Clinic, Department of Infectious Diseases Q
REVIEW RETURNED	20-Sep-2021

GENERAL COMMENTS	Mainly comments to methods and ethics: Were the participants asked if they wanted to contribute to (this) research project? How were unaccompanied minors informed about the data collection?

	Travel routes differ (and hence travelling time – exposure) – Bangladesh and Eritrea How were the repeated consulations counted? Unique entries or multiple entries? – needs to be clarified in methods and in table 2 and 3 How were patients with more than one health condition treated in the analysis? The nature of the incomplete data is not clear to me Rape: was there any recording of where the rape took place – home country, war related, travel, Libya? Could some migrants have reason to hide physical health compliants?

VERSION 1 – AUTHOR RESPONSE

Reviewer: 1

Dr. Polyxeni Theodosopoulou, National and Kapodistrian University of Athens

Comments to the Author:

A very well-analyzed research on patient conditions onboard rescue vessels. Further papers regarding treatment and health conditions onboard are needed, as the majority of the literature describes refugee and asylum seeker's conditions on land-bound services.

I would add a paragraph explaining the organisation of the outpatient clinic onboard the MSF's SAR vessels including description of equipment, personnel involved as well as triage procedure. Thank you for your suggestion, we believe that line 97-106 describes the medical staff onboard of the vessels (physicians and nurses), as well as the diagnostic tests/tools available onboard of the vessels (body temperature, blood pressure, pulse oximetric, hemoglobin test, blood sugar, urine dipstick, malaria rapid test, pregnancy test). For all other types of more complex diagnosis, referrals were made to clinics on land. We have added a sentence describing the treatment available onboard (line 101-103): “Treatment options were limited to basic wound care, oxygen and a limited number of pharmaceuticals. Any patient requiring more complex treatment needed medical evacuation.”

I have not quite understood what you mean by the term "non-violence related injury", so could you add a simple sentence either describing the type of injury you are referring too or by giving an example? We mean here to distinguish between injuries that were caused by violence (“violence-related injuries”) and injuries that were not caused by violence (“non-violence-related injuries”). We have clarified this in line 216: “non-violence related injuries (i.e. injuries that were not caused by violence)”.

I would be interested on a comment concerning the severe delays often encountered when it comes to receiving an assignement towards a safe place for disembarkation. How is the outpatient clinic's routine adjusted when delays accompanied with overcrowding occur? The routine of the outpatient clinic and care provision did not get adjusted with the delays and overcrowding however, as we have mentioned this in line 251-258 of the discussion section: “The increasingly long standoffs on sea has led to overcrowding on the vessels and directly impacted the volume of OPD consultations and physical and psychological complaints.”

All in all I find your article very enlightening. Such efforts to describe one of the most serious tragedies occuring in the Mediterranean Sea are needed in the literature.

Reviewer: 2
Prof. Morten Sodemann, Odense Universitetshospital
Comments to the Author:
Mainly comments to methods and ethics:

Were the participants asked if they wanted to contribute to (this) research project? For this retrospective analysis we included only routine data that was collected in our OPD clinics on the search and rescue vessels. This routine data consisted of only aggregated data such as number of pregnant women rescued, number of consultations in patients under and over five years of age per week, number of diagnosis of scabies per week, etcetera. Therefore no explicit consent for this retrospective analysis was sought from patients.

How were unaccompanied minors informed about the data collection? See above.

Travel routes differ (and hence travelling time – exposure) – Bangladesh and Eritrea. Unfortunately we only have aggregated data on the countries of origin of refugees, asylum seekers and migrants, which are included in Table 1. We do not have data on the route that they subsequently travelled and led them to the search and rescue vessels.

How were the repeated consulations counted? Unique entries or multiple entries? – needs to be clarified in methods and in table 2 and 3.

Repeated consultations were counted as “follow-up consultations” while first consultations were counted as “new consultations” (see line 137 in the methods section). We have no data available to elicit how many second or third or more consultation were conducted for the same condition in the same patient.

The upper part in Table 2 breaks down the number of new/first consultations, and the number of follow-up consultations:

	N	**%**
All consultations	**12,438**	
Number of new consultations	*9,811*	*78.88*
Other follow-up	*211*	*1.70*
Number of dressings New	*772*	*6.21*
Number of dressings Follow-up	*334*	*2.69*
Number of injections	*1,310*	*10.53*

How were patients with more than one health condition treated in the analysis? Table 3 shows the number of times each health condition was diagnosed in the OPD clinics. Considering the high work-pressure our medical staff is under on the search and rescue vessels, data was only collected in aggregated numbers, by using tally sheets. So the data that we have at our disposal for this analysis only captures how frequently a specific diagnosis was made in the OPD clinic. The data tool does not capture individual patient level data, such as how many diagnosis did one patient have, and which ones. The number of diagnosis in Table 3 is higher than the number of consultations due to staff turnover that lead to variation in procedures, documentation and measurements. For example, for

some months the deck management of motion sickness, headache and deck inspection of scabies were included in the OPD consultations, while other months they were excluded from the total OPD consultation counts.

(see also Table 3, footnote 1: “Number of times disease or condition was diagnosed at the outpatient department between January 2016 and December 2019. Total number of diagnoses exceeds the total number of consultations due to staff turnover that lead to variation in procedures, documentation and measurements. For example, for some months the deck management of motion sickness, headache and deck inspection of scabies were included in the OPD consultations, while other months they were excluded from the total OPD consultation counts.”)

The nature of the incomplete data is not clear to me. The discussion of missing data is captured in the limitations section (line 317-335). Due to the work-pressure and sudden influxes of patients, our medical staff was not always able to accurately document diagnoses and demographic characteristics. Which means that we do not have reliable population counts or denominators.

Rape: was there any recording of where the rape took place – home country, war related, travel, Libya? Unfortunately there was no recording of where the rape took place.

Could some migrants have reason to hide physical health complaints? See line 323-326: Due to the limited testing and diagnoses capacity of the outpatient department, space limitations and the generally short length of stay of migrants, refugees and asylum seekers on the ship, it was not feasible to provide in-depth medical and psychological treatment and support, which has likely led to an underestimation of actual morbidities including mental health conditions and SGBV.
Shame and stigma may have also led to the under-reporting of certain physical and psychological health complaints.