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Psychological and psychosocial consequences of zoonotic cutaneous leishmaniasis among women in Tunisia

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**Cutaneous Leishmaniasis: Global burden, mental consequences and treatment
opportunities**

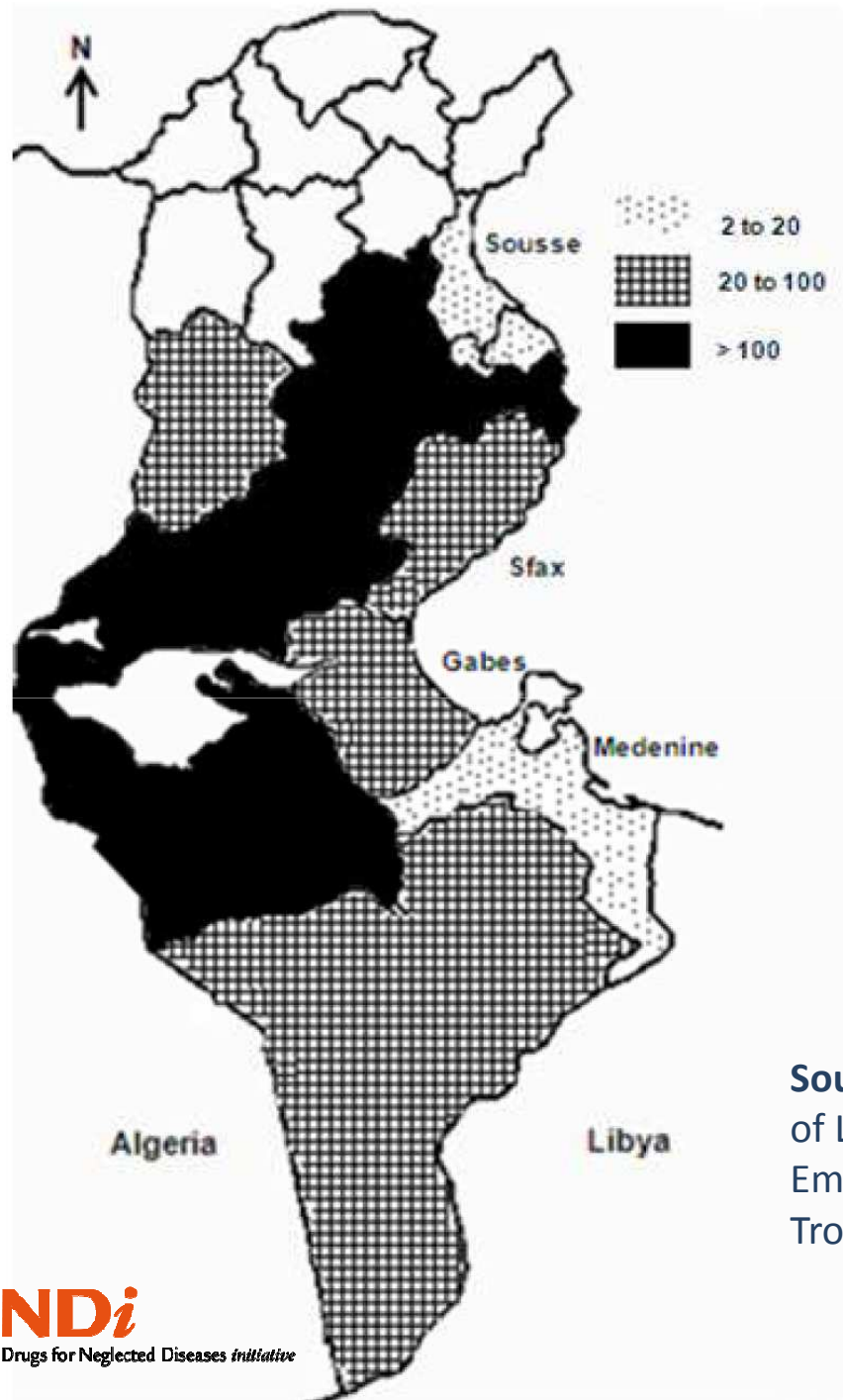
Introduction

- Zoonotic Cutaneous Leishmaniasis (ZCL) is a human **vector-borne disease**
- *Leishmania* is transmitted to human skin by the bite of sand fly
- It is the most common form of leishmaniasis in Tunisia
- **Emerging disease** since 1982
- **Huge outbreak** every 5 years, in average
- Women and children are particularly affected

Introduction

Distribution of ZCL

ZCL endemic: Center, South
Sidi Bouzid: 40% of notified cases
in Tunisia



Source: Akila Fathallah Mili et al, Retrospective Analysis of Leishmaniasis in Central Tunisia: An Update on Emerging Epidemiological Trends. Current Topics in Tropical Medicine. cdn.intechopen.com/pdfs/32499.pdf

Introduction

- ZCL is not fatal, permanent scar
- From region to region, it is known as:
 - The button of the East
 - Clou (nail of) of Biskra
 - Aleppo button
 - Tabaa (stamp) of Sidi Bouzid



Objective

Evaluate the psychological and social impact of ZCL on women with facial scar in the region of Sidi Bouzid.

Methods

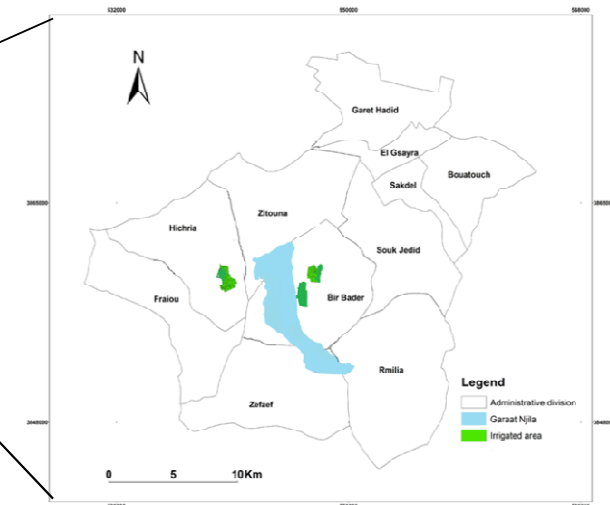
Study area



Location of Tunisia within Mediterranean basin



Location of Sidi Bouzid



Location of Study area

- Semi arid climate
- Farmers, highest illiteracy rate
- Tow rural districts: 12 500 population

Instruments

Revised Illness Perception Questionnaire (IPQ-R,

Moss-Morris et al., 2002):

- Identity
- Causes
- Timeline
- Consequences
- Curability
- Controllability
- Coherence
- Emotional representation

Instruments

Questionnaire of psychosocial adjustment to the stress of skin disease (PLSI, Gupta & Gupta , 1995):

- Anticipation / avoidance of stress
- Experiences of rejection

Instruments

WHOQOL – 26 (World Health Organization, 2009):

- Physical
- Psychological
- Social
- Environmental quality of life

Procedure

- Questionnaires administration: psychologist, health educator
- IPQ-R, the PLSI and WHOQOL-26
- Random sample of girls and women
- All people who participated in this study were consenting

Age	N	%
< 20 years	19	46
21-30 years	16	39
>30 years	6	15
Level of education		
Illiterate	7	17
Primary	5	12
Secondary	23	56
Superior	6	15
Work Statute		
Working	2	5
Student	21	51
Jobless	18	44
Socioeconomic level		
Low	11	27
Medium	27	66
High	3	7
Marital statute		
Single	33	80
Married	7	17
Widowed	1	2

Results

41 adolescent girls and women from the communities of:

- El Hichria (n = 31)
- Bir Badr (n = 10)

- 93% one scar on the face
- 54% scars other parts of the body: 37% one, 15% two and
- 2% no facial scars

Results

Distribution of the scores on the IPQ-R, PLSI and WHOQOL different domains

	Mean	Min	Max	Std.Dev	Coef. Var.
IPQ-R	63.6	34.0	104.0	15.6	24.5
PLSI	9.5	0.0	25.0	6.7	70.7
WHOQOL domains					
Physical	63.0	28.6	82.1	12.9	20.4
Psychological	52.6	29.2	79.2	11.1	21.0
Social	61.8	12.5	100.0	17.5	28.3
Environmental	47.8	18.8	75.0	13.3	27.9

Min : Minimum, Max : Maximum, Std.Dev : Standard deviation, Coef.Var : Coefficient of variance

Representation of the identity of CL

- Scars: mark of the identity
- Gender dimension: women
- ZCL:
 - a disease common to generations of some regions more than others
 - due to the bites of "mosquito"
 - associated with the presence of rats
 - related to variations in climate and ecological context as in Sidi Bouzid

Representation of the causes

- Responsibility of human beings
- Ecological and physical context
- Concept of vector and reservoir
- The score of "Knowledge" was:
 - positively correlated to educational level ($r = 0.39$, $p < 0.05$).
 - negatively correlated to the number of scars on the body ($r = -0.44$, $p < 0.01$)

Representation of the consequences

- Social withdrawal
- Stigma
- Increased interpersonal conflicts
- Affect chances of getting work
- Reduces the "chances" of marriage
- Alter their natural beauty
- Decrease their value in society

Representation of the personal control

- Helplessness and incurability
- Nothing useful against disease, no effect of drugs
- The risk of being hit again is still likely
- Understanding the problem: enigmatic disease and poorly understood problem, wondering "*why me*"

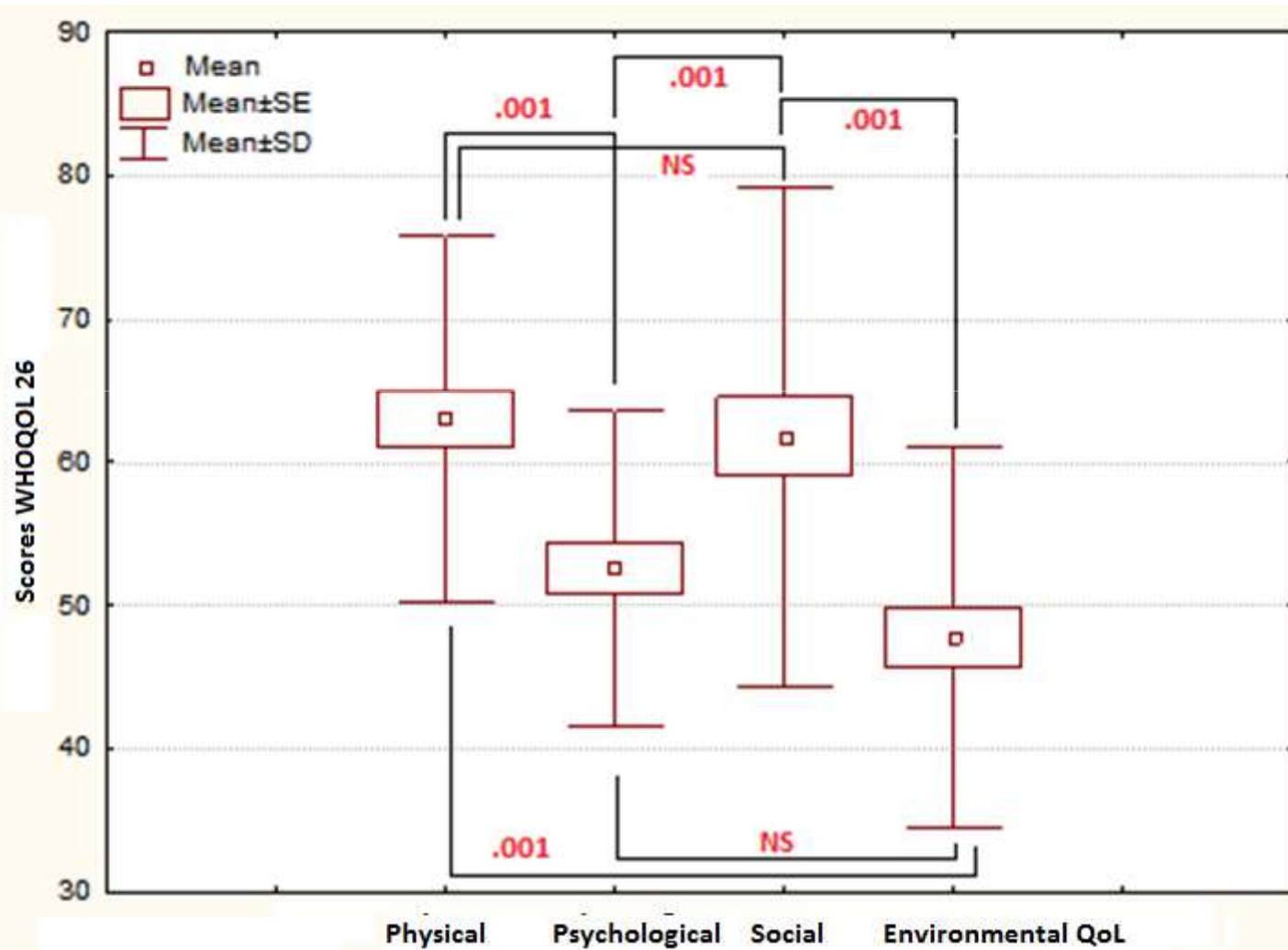
Emotional representation

- Loss of esteem
- Feelings of inferiority
- Social disadvantage
- Great shame
- Huge sense of injustice and anger
- Source of depression and anxiety
- High education/knowledge levels were associated with greater perception of consequences and emotional representations

Stress and stigmatization

- Anticipation of a negative reaction, avoidance behaviors
- Negative experiences via social interactions
- IPQ-R correlated with PLSI factors
 - Anticipation/avoidance correlated with "Consequences", "Coherence" and "Emotional representation"
 - Rejection experiences correlated with "Emotional representation"
 - "Rejection experiences" and the "anticipation and avoidance of stress" negatively correlated with age

Impact of CL on the quality of life



Conclusions

- Few studies focused on quality of life and the psychological impact of CL
- Anticipation of stigma and avoidance coping strategies
- Intense feeling of social inferiority and discrimination
- Negative impact on psychosocial personal, familial, professional and social adjustment

Recommendations

- Interventions: associations, health clubs, local and national leaders
- Health professionals, media and schools
- Public health officials: attention to the gaps in:
 - knowledge perceptions
 - women vulnerability
 - exposure prevention
 - psychological support
- Combating real and perceived stigmatization: essential

Acknowledgements

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