

Psychological Aspects of the Health Care of Young Children – LM Richter, M Bac, IT Hay



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Curriculum vitae

Linda Marleine Richter graduated with a PhD from the University of Natal (Durban) in 1981. She is a registered clinical psychologist with SAMDC and was senior lecturer in the Department of Psychology, University of Natal, Durban (1974-1982). Linda was a visiting research fellow at the Universities of London, Nottingham, and Edinburgh in 1981 to 1982 and currently she is chief researcher in the Institute for Behavioural Sciences, University of South Africa. Her special field of interest is developmental psychology.

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Summary

This paper describes a study of the psychosocial factors involved in the rate of catch-up growth, over a period of eighteen months, exhibited by children treated at the Gold Fields Nutrition Unit. Poverty, social support, home environment and maternal resources were assessed, as was the quality of the mother-child bond, classified according to attachment type. The results indicated that the global influences of poverty and social support had no direct relationships with children's weight gain, but that the quality of attachment and the mother's resources were significantly associated with catch-up growth. Suggestions are offered for ways in which primary health care workers can help to improve caregiver-child relationships, maternal resources and social supports for mothers of infants at risk for undernutrition.

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KEYWORDS:

Malnutrition; Child; Child Development; Health Care Delivery; Psychology; Poverty; Mother-child relations.

"Facts for Life"

Child Growth Prime Messages: Number 8. "Talking, playing and showing love are essential for a child's physical, mental and emotional growth."

In addition to physical needs, the child also has two other needs which are vital to his or her mental and emotional development:

- the need for attachment
- the need for stimulation

A Biopsychosocial Perspective

The very idea of holistic primary health care is based on what has been called a *biopsychosocial* perspective in medicine. This implies the acceptance of multi-cause, multi-effect models of human functioning that unite psychological and social forces with biology in order to further understanding of the prevention, aetiology and outcome of illness.¹

Paediatrics, in particular, has never been able to view child patients in isolation from their psycho-social contexts. The rapid growth and adaptation of children forces child specialists to adopt a longitudinal or process view of children's health; by necessity taking account of developmental change, emotional and cognitive growth, and family and environmental influences, whether they act for better or for worse.¹

A broad and holistic view is imperative to health care in communities where the major health problems of children are inextricably linked to the social, psychological and biological dimensions of poverty. The morbidity and mortality patterns of South Africa's approximately 10 million children reflect a cycle of, what Molteno, Kibel & Roberts² call "inadequate protection from the environment"; a cycle in which undernutrition is the crucial factor in the formula for ill health. The socially and personally disorganizing effects of migrant labour, forced removals and unplanned urbanization, are deeply implicated in creating and maintaining children's vulnerability to illness and death in South Africa.³

Women's Work

The initiatives proposed by UNICEF* to tackle childhood

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vulnerability amongst impoverished people include the health measures known by the mnemonic GOBI-FFF (growth monitoring, oral rehydration, breastfeeding and immunization, together with an emphasis on family spacing, female education and food supplements), and the widespread dissemination of the basic health information

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contained in the joint UNICEF, WHO and UNESCO publication called "Facts for Life". The major aim of these initiatives is to take immediate action to reduce infant and child mortality rates, without waiting for the political and economic changes necessary to achieve the same goals through a more equitable distribution of wealth and opportunity.

The emphasis in GOBI-FFF on female education is an explicit acknowledgement of the crucial role that women play in ensuring young children's health and survival, both directly as caregivers and indirectly as primary breadwinners.⁵ Less obvious however, is the complete reliance on women, as the targeted recipients of health-relevant information, to implement new approaches to maintain and improve the health of their children, families and communities.

There is a much greater awareness of the role that social disorganization plays in childhood morbidity and

mortality, than the role it plays in disabling the nurturing capacities of mothers and caregivers. However, the material and psycho-social conditions of economic hardship and dependence, family breakdown and overcrowding increase the vulnerability of children *through* their detrimental effects on the morale, motivational states and actions of the women responsible for childcare.⁶

Socio-economic parameters are distal variables which impinge on the growth, development and health of young children in indirect ways. The proximal experiences of children (what they eat, how they're bathed, with whom they have contact) are created, in the main part, by women, operating within a set of social and community relationships that, to differing degrees, sustain and impart meaning and importance to their childcare activities. Many studies point to the importance of

GOBI-FFF

G - Growth monitoring
O - Oral rehydration
B - Breast feeding
I - Immunization
+
F - Family spacing
F - Female education
F - Food supplements

emotionally warm interactions between mothers and their young children, of opportunities for stimulation, and of social support and connectedness for mothers, as crucial ingredients in the creation of optimal home environments for young children.^{7,8,9}

Attachment

Even detailed analyses of the interpersonal and physical features of children's home environments, however, do not reach into the psychological dimensions of the caregiver-child relationship which structure children's experiences and determine the quality of care that

Our 10 million South African children suffer from "inadequate protection from their environment"

children receive. Nonetheless, there is wide agreement that socio-economic and other stresses can adversely affect caregiving practices through the struggle, fatigue and demoralization which poor and disadvantaged women endure.^{10,11}

Mary Ainsworth's attachment classification system¹² based on John Bowlby's theory of attachment organization in children,¹³ offers a way of assessing the historical dimensions of child-caregiver relationships and those attitudinal aspects of a child's care that are internalised by a child.¹⁴ The "strange situation" is the standardized procedure developed by Ainsworth & Wittig¹⁵ to assess attachment under conditions of separation and re-union with the primary caregiver. Attachment is classified on the basis of several behaviour dimensions (proximity- and contact-seeking, contact-maintaining, avoidance and resistance) into three major categories (secure, anxious-resistant, and anxious avoidant).

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Securely attached infants share enjoyable and mutually responsive relationships with their mothers, and the mother-child interactions are characterized by infant compliance, cooperation and exploration of the environment. These babies usually show high levels of social competence which have been found to persist well into the pre-school years. Babies with anxious-resistant attachments show ambivalence and frustration towards

Take immediate action without waiting for the political, social and economic changes

their mothers, which is expressed by simultaneous clinging, distress and anger when re-united with their mothers after a brief separation. These babies are believed to behave in this way as a result of a history of inconsistent and insensitive care. Babies with anxious-avoidant attachments appear to be detached from their mothers who, in turn, often rebuff efforts by the infant to establish close bodily contact. These babies appear resigned to the fact that their needs are not likely to be met by their primary caregivers. Both groups of anxiously attached babies (resistant and avoidant) show less exploration of the environment and less competence in problem-solving situations than securely attached babies.¹²

Attachment classifications have proved useful to, amongst other things, predictions of child adjustment at later ages,¹⁶ and to an understanding of caregiver-child psychopathology as occurs in non-organic failure-to-thrive,¹⁷ child abuse

and child neglect.¹⁸ Cecily Williams¹⁹ was the first person to record maternal deprivation as one of the causal factors in malnutrition, and more recent observers^{20,21} have reiterated the suggestion that infant malnutrition may have a common aetiology with other disorders of attachment. Currently, both we,²² and Marta Valenzuela in Chile,²³ are directly examining the relationships between attachment and malnutrition in young children.

The Present Study

The long-term relationships between nutrition, health status, attachment and psycho-social influences in a group of children previously hospitalized for protein-energy malnutrition are being examined in a follow-up study. In 1987 we studied 36 infants together with 36 control children matched for age and sex. The mean age of the infants was 14 months (SD=2,7; range 8-18), with equal numbers of males and females in each group. The children were assessed on a wide range of health, anthropometric and psychological dimensions; the latter included developmental status, mother-child

We are completely reliant on women to implement new approaches of health care

play, social behaviour with peers, problem solving, and the development of emotional regulation and self-concept. Eighteen months later, all the subjects were traced and 26 children in each group were re-examined (mean age = 32 months; SD = 3,3; range 25-38). Ten children

of both groups of children could not be re-examined because they had either left the area or moved to an unknown address. As far as could be assessed none of these children had died at the time of the survey. We report here only *the recovery* of the malnourished children in terms of weight-for-age (WFA) as a function

Secure babies explore the environment far more and show more competence in problem-solving situations

of attachment classification, and of specially constructed indices of poverty, maternal social support, home environment and stimulation, and maternal personal resources.

The indices were operationalized on the basis of specific information obtained in interviews with mothers or other primary caregivers and were constructed in the following way:

- The Poverty Index was based on an 8-item rating scale consisting of questions regarding: household income; household density; sanitation; access to water; type of housing; home ownership; and cooking facilities.
- The Social Support Index was based on an 8-item rating scale consisting of questions regarding: resident members of the household; marital status; father's support of the child; father's presence in the home; mother's contact with relatives, friendships with women of same-aged children, church attendance, and access to shops.
- The Home Environment Index was

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based on a 6-item rating scale consisting of questions regarding the level and frequency of mother-child play, father-child play, and mother teaching activities; type of play objects available to the child; child's outings; and the type of media available in the home.

- The Maternal Resources Index was based on a 7-item rating scale consisting of questions regarding: mother's education and the literacy of her parents; mother's age at birth of first and index child; number of deceased and living children; mother's experimentation with cooking and gardening.

Attachment status was based on two independent classifications of the child's behaviour during the "strange situation" which was videotaped. The rehabilitation of the malnourished

children took place in the programme run at the Goldfields Nutrition Unit, under the directorship of Dr Martin Bac.

Results

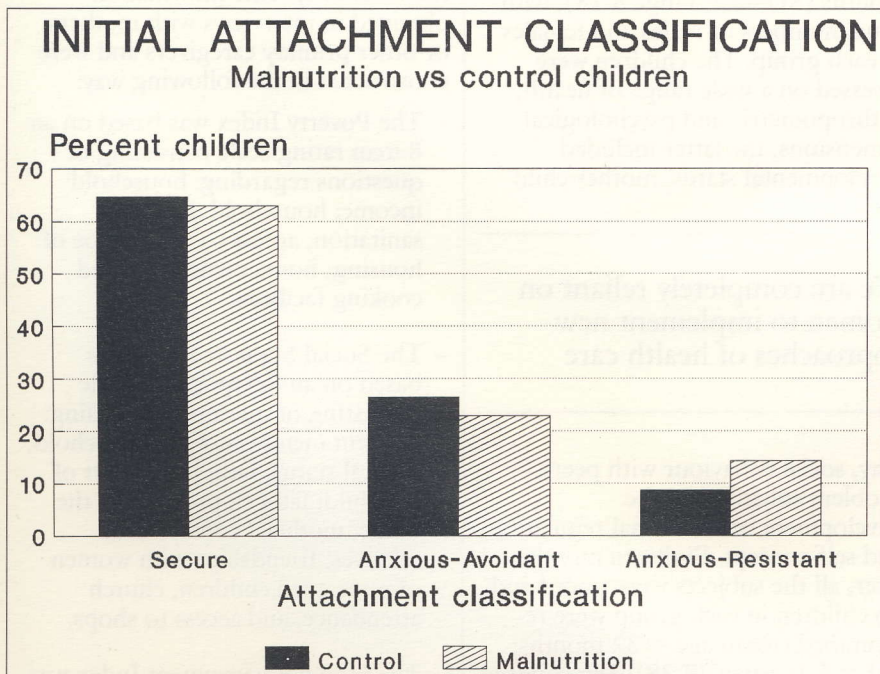
The relevant results can be summarized as follows:

1. Initial attachment classification did not differentiate malnourished children from the control group (see Figure 1). Moreover, the distribution of attachment classifications among the control and malnourished children corresponded closely to that reported amongst normal children from other cultural groups.¹² That is, there was no evidence to suggest that the malnourished children, as a group, showed predominantly insecure attachment patterns or attachment

patterns typical of abnormal groups of children, such as those with confirmed histories of abuse. We would suggest, on the basis of other evidence (see point 2 below), that the main reason for the absence of clear-cut differences in attachment classifications between the malnourished and control children, is that malnourished children do not form a discreet group, who are qualitatively different from other children drawn from the same economically and socially disadvantaged community. Rather, they are children on the extreme end of the growth continuum, on the side of low weight and undernutrition as is typically found amongst children growing up in poor circumstances.

2. The mean Poverty Index of the malnourished children (10,4, SD = 2,1) was not statistically significantly different from that of the controls (10,3, SD = 1,7), although the poverty index was slightly higher (that is, poorer households) amongst the malnourished children, and higher amongst the children of lower weight in both groups (see Figure 2). This data indicates that, while protein-energy malnutrition and its associated illnesses are, in general, a manifestation of the impact of poverty on a child's growth and health, the relationship between WFA (at the initial assessment, in this instance) and poverty is non-specific in individual children.
3. The initial WFAs of the malnourished children showed no statistically significant Pearson product-moment correlations with any of the variables of interest in this

Figure 1



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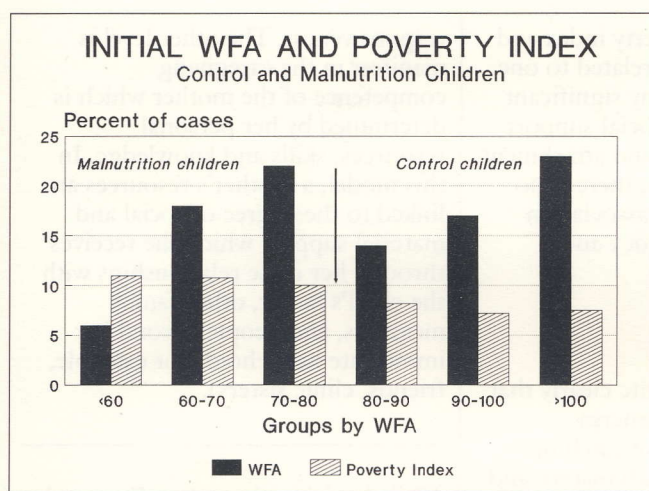


Figure 2

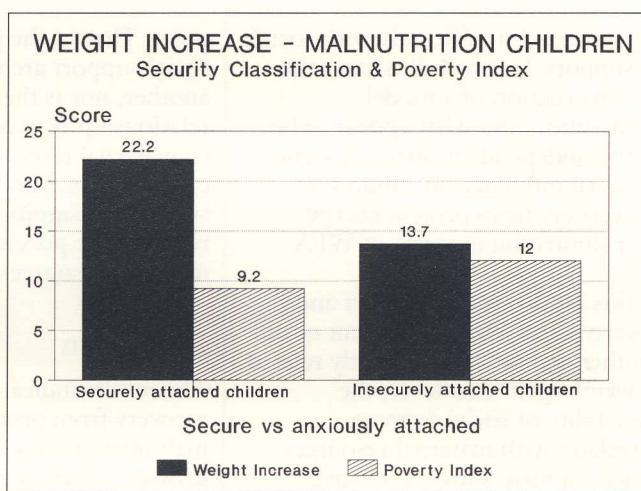


Figure 3

report - neither with attachment classification ($r = 0,03$), nor the indices of poverty ($r = 0,28$), social support ($r = 0,1$), home environment ($r = 0,2$), and maternal resources ($r = 0,1$). These results are consistent with our earlier findings on a much larger sample of malnourished children ($n = 135$), which indicated that neither socioeconomic nor family structural variables differentiated malnourished from control babies drawn from the same impoverished urban environments.²⁴ However, in the same study we found several differences between the two groups of mothers in terms of their caregiving attitudes and behaviours; for example, at the time of the children's admission to hospital, mothers of malnourished children experienced less support from the fathers of their children, and they also reported their relationships with their children to be less pleasurable than did mothers of control children.

- Forty three percent of the malnourished children showed rapid catch-up growth (> 15 points) over the 18-month follow-up period. On the other hand, the control children began to manifest growth faltering relative to the reference values, as has been found to be typical of the growth pattern of African children in South Africa during this age period.²⁵ More than 50% of the control children lost in excess of 15 WFA points over the follow-up period. As would be expected from the foregoing, there was a statistically significant difference ($t = 4,5$; $df=48$; $p<0,001$) between the mean growth rate (grams per day) of the malnutrition (7,9, $SD = 3,1$) and control groups (4,8, $SD = 1,96$).
- Secure and anxiously attached malnourished children showed significantly different mean catch-up growth as tested by the Mann-Whitney U-statistic ($z=1,56$; $p<0,05$), with securely attached children showing nearly twice the

average WFA point gain (22,2, $SD=13,7$) as children classified as anxiously attached (13,6, $SD=10,6$). However, as shown in Figure 3, securely attached children were also found to have significantly lower average poverty indices (9,2, $SD=2,5$) than anxiously attached children (12,0, $SD=1,8$; $z=2,11$; $p<0,05$). As previously mentioned, there was no significant difference between the initial mean WFA of securely (71,1, $SD=10,0$) and anxiously attached malnourished children (72,6) $SD=11,9$). That is, there appeared to be a relationship between the poverty index and attachment classification in the malnutrition sample.

- Mothers' personal resources were also found to have a significantly positive correlation with the weight gain of malnourished children ($r = 0,4$; $p<0,05$). Although the maternal resources index was not found to be related to either the poverty index or attachment classification, it was

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associated significantly with social support. Figure 4 illustrates the construction of a model incorporating what appear to be two independent lines of psycho-social influence on children's recovery from protein-energy malnutrition in terms of WFA.

In this model, social support and the poverty index are independent of one another and neither is directly related to weight gain. However, the availability of social support correlates with maternal resources which, in turn, shows a positive relationship with weight gain. On the other hand, attachment classification shows a strong relationship with the poverty index and differentiates between children who do and do not show fast catch-up growth following protein-energy malnutrition. The two lines of influence appear to be independent of one another at each

point. That is, the poverty index and social support are not related to one another, nor is there any significant relationship between social support or maternal resources and attachment classification. Similarly, there is no statistically significant association between the poverty index and maternal resources.

Discussion

The results indicate quite clearly that recovery from protein-energy malnutrition in terms of catch-up growth is related to both macro- and micro- psycho-social influences which impinge on the child. The actual impact upon the child would appear to be identifiable at two levels. One level is the plane of interpersonal interaction between caregiver and child, diagnosed psychologically as attachment classification and identified by their mutual emotional

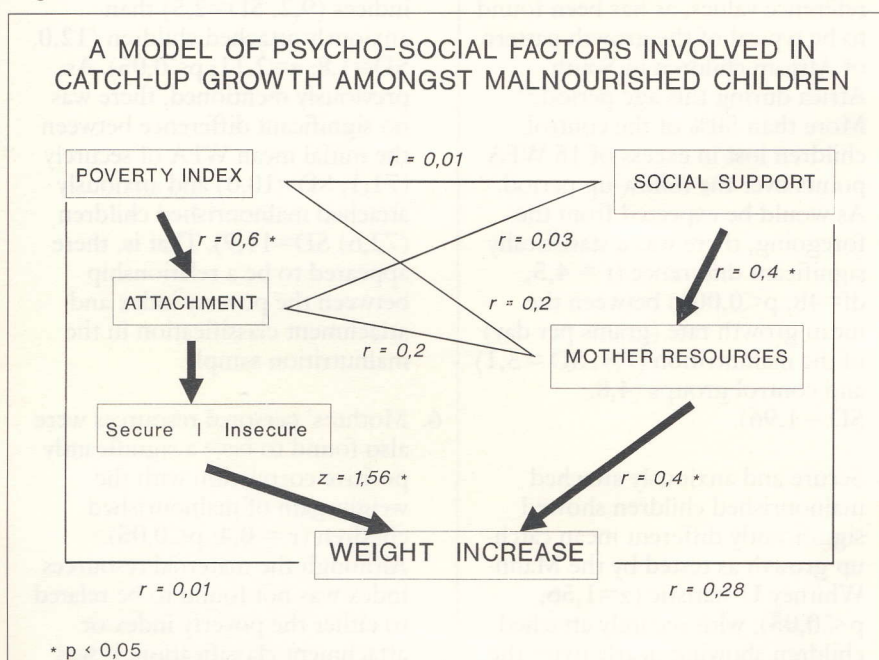
responsiveness. The other level is manifest in the caregiving competence of the mother which is determined by her personal resources, skills and knowledge. In this model, a mother's resources are linked to the degree of social and material support which she receives through her close relationships with the child's father, other family members, and people beyond her immediate household (for example, friends, clinic sisters).

Malnutrition is not a disease state, but the extreme point of a child's vulnerability to multiple effects of poverty

The consequences of both macro- and micro- psycho-social influence upon the mother are such that they seem to be able to disrupt her ability to encourage and sustain her child's recovery from illness. As Hepner & Maiden²⁶ put it: "A mother may have the best intentions and desire to perform adequately, but her priority for this effort may be deflected by inundating life circumstances beyond her control. Thus the pathology of social and economic inadequacy may disrupt the maternal-child relationship required for successful child nurture" (p 211). The results of the present study provide evidence of the disruptive effects on the mother-child relationship and on the quality of child care that can be associated with poverty and with a lack of supports in the mother's social environment.

The importance of these findings derive from the fact that recovery from protein-energy malnutrition can

Figure 4



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provide an exemplar or prototype for understanding the psycho-social forces which affect the rehabilitation of children suffering from all types of poverty illnesses exacerbated by poor growth. Malnutrition is not a disease state, but the extreme end point of a child's vulnerability to the combined, multiple effects of poverty.

Many complex inter-relationships exist between the socio-economic, interpersonal and psychological influences that affect a child's state of health. We have identified only some of the psycho-social parameters that may be relevant to generating explanatory networks for understanding these inter-relationships. The application of these findings for improving health care for young children lies in being able to generate specific recommendations for interventions by primary health care personnel. The study described here suggests that, in practice, answers need to be found to the following two questions:

1. How can mothers and babies be helped to establish and maintain secure and happy relationships?
2. How can health service personnel help to improve both maternal resources and maternal social support systems?

Comprehensive replies to these questions require the intensive involvement and commitment of social science research and practice in the development of health care interventions. Nonetheless, below we offer some suggestions that may be useful guides for achieving the goals of improving caregiver-child relationships, and increasing the ability of caregivers to ensure children's health, recovery and survival.

Some suggestions for improving caregiver-child relationships, maternal resources and social support

Caregiver-child relationships

The emotional tone of early caregiver-child relationships becomes established by the second half of the first year of life. Thus, it is important to stimulate the development of good relationships during the first six months of life. Some of the following activities may help to achieve these:

1. Close physical contact
2. Prolonged breast-feeding
3. Educating mothers to the emotional signals of babies, especially as these signals become very specific to the primary caregiver in the earliest months of life - selective smiling, visually following her movements, turning to the sound of her voice, quietening and becoming alert when she speaks gently to her baby with her face close up to his/her face, and so on.
4. Teaching mothers about the emotional needs of very young children - especially the distress displayed by infants when they are ignored, or when their needs are not understood.
5. Helping mothers enjoy their babies by teaching them appropriate baby songs and games which typically elicit high levels of smiling and enjoyment from young infants. The pleasure expressed by babies is very compelling and routinely elicits positive emotions from caregivers.
6. Combating the impotence and/or guilt that mothers experience with regard to their children's ill health,

by helping them feel that they, individually can make a fundamental contribution to their child's well-being.

Social support and maternal resources

1. Giving the mother knowledge and skills regarding nutrition, child care and health, that are relevant and appropriate to her situation.
2. Increasing the material supports available to the mother by guiding and assisting her to obtain maintenance or welfare financing, by facilitating negotiations with local authorities, employees, landlord-farmers etc on issues pertinent to children's health, and by encouraging service organizations and charities to support clinics and give mothers direct help in the form of food and clothing during interim or crisis stages of intervention.
3. Increasing the earning capacity of mothers by teaching informal occupational skills, by enrolment in literacy programmes, and by assisting women to find employment.
4. Increasing the social supports available to mothers by offering advice to improve their relationships with the fathers of their children, by encouraging increased contacts within the extended family and the involvement of other family members in the child's health care, and by assisting mothers to establish interpersonal relationships through the clinic, either with the staff directly or with other mothers by the formation of play- or help-groups, and through church groups and other voluntary associations.

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